# English Section Pages 1-60 Nepali Section 61-105

## The Plant Protection Regulation, 2010

In exercise of the powers conferred by Section 35 of the Plant Protection Act, 2007, the Government of Nepal has framed the following rules:

### Chapter-1

## **Preliminary**

- **1. Short title and commencement:**(1) These rules may be cited as the Plant Protection Regulation, 2010.
  - (2) This Regulation shall come into force at once.
- **2. Definitions:** Unless the subject or the context otherwise requires, in this Regulation,-
  - (a) "Genetically modified organism" means any plant or plant product which has been produced by substitution of the gene of a species by the gene of another species through the recombinant Deoxyribonucleic Acid (DNA) technology.
  - (b) "Act" means the Plant Protection Act, 2007.
  - (c) "Chief of Office" means the chief of office established pursuant to Section 33 of the Act.
  - (d) "Living modified organism" means any plant or plant product capable of being reproduced which possesses a novel combination of genetic substances with genetic quality for higher productivity or resistance to the pest in the plant through the use of modern bio-technology.

- (e) "Transgenic substance" means disease, insect and adverse environment resistance species of living plant or organism produced by research in a laboratory, glasshouse or field through the reconstituted DNA technology of which uses cause not any adverse effect to human beings and environment.
- (f) "Laboratory" means a laboratory specified by the Government of Nepal by a notification in the Nepal Gazette.
- (g) "Post entry quarantine" means any phyto-sanitary related examination of physical condition of imported seeds or living plants which have been planted in a glass house/screen house or a nursery or such other facilitated field for a specified time period.
- (h) "Pest free production area" means an area that is certified on scientific basis as not having specific pest and where such situation is maintained officially for a defined period.
- (i) "Pest free area" means an area certified on the scientific basis as being free from specific pest of quarantine importance and where such situation is officially maintained.

### **Chapter-2**

# Provisions relating to functions, duties and powers of Committee and Organization

- **3. Functions, duties and powers of Committee:** The functions, duties and powers of the Committee shall be as follows, in addition to the functions, duties and powers se forth in Section 5 of the Act:
  - (a) To render necessary assistance to the Government of Nepal in phyto-sanitary measures and plant protection related activities,

- (b) To prescribe phyto-sanitary measures to mitigate the risks in plants or plant products after carrying out the risk analysis from importing living modified organisms or genetically modified organisms,
- (c) To recommend the Government of Nepal to enforce internal quarantines to check/restrict the movement of plant or plant products carrying quarantine pests from one location to other within the country
- **4. Functions, duties and powers of National Plant Protection Organization:** The functions, duties and powers of the National Plant Protection Organization shall be as follows, in addition to the functions, duties and powers as set forth in Section 6 of the Plant Protection Act, 2007:
  - (a) Where deemed necessary, based on scientific evidences, to declare pest outbreak endangered area, pest free area, pest free production site/zone or area of low pest prevalence,
  - (b) To prescribe standards required to be observed in carrying test, treatment of plants or plant products, establishing post entry quarantine facilities, area of low pest prevalence and establishing laboratories or treatment rooms to be established by the private sector,
  - (c) To make recommendation to the Government of Nepal for the validation/accreditation of laboratories which are established by the private sector to carry out test, treatment or research of plants or plant products and meet the standards as referred to in clause (b),

- (d) To encourage research and studies to mitigate risks likely to occur on plant or plant products from the entry of living modified organisms, genetically modified organisms or transgenic substance,
- (e) To carry out regular study, research and surveillance of regulated pests, and update information thereon and provide such information to the concerned bodies or organizations,
- (f) In an event of the entry of quarantine pests in any area of Nepal, to promptly adopt required phyto-sanitary measures to prevent the spread thereof to another area and inform at once to the concerned bodies or organizations,
- (g) If economic loss or damage is likely to occur or foreseen from the spread of quarantine pests, to enforce internal quarantine for their spread at once,
- (h) To frame phyto-sanitary measures and standards conforming to the internationally adopted standards and enforce, or cause to be enforced, such measures and standards,
- (i) To make recommendation to the Government of Nepal to accredit/recognize laboratories, post entry quarantine facilities, areas of low pest prevalence or treatment rooms at the private level meeting the standards specified pursuant to the Act and this Regulation,
- (j) To encourage also the private sector to carry out activities relating to post entry facilities, test centers, laboratories and treatment procedures,

(k) To get approval and enforce the good agriculture practices in order to encourage quality products for the promotion of exports.

### Chapter-3

## **Provisions relating to entry permit**

5. Application for import entry permit: (1) A person or body that intends to import into Nepal any plants, plant products, biological control agents, beneficial organisms or plant growing means such as soil, moss, and peat has to make an application, accompanied by the application fee of two hundred rupees, and in the format referred to in Schedule-1, to the Chief of Office for the entry permit.

Provided that if such item is imported for the purposes of research/studies, an application as referred to in this sub-rule has to be made to the chief of National Plant Quarantine Program.

- (2) An application to be made pursuant to sub-rule (1) has to be accompanied by the following documents:
  - (a) A copy of the citizenship certificate or passport of the importer,
  - (b) A copy of the certificate of registration of body and renewal thereof if import is intended to be made in the name of such organization,
  - (c) A copy of the pro forma invoice of the organisms to be imported,
  - (d) Recommendation of the Seeds Quality Control Center if an import of seeds is made,

- (e) If an import is made for the purpose of research, a request letter of the researcher person or organization and recommendation made by the Nepal Agricultural Research Council.
- (3) If, on examination of the documents accompanied by the application received pursuant to sub-rule (1), the Chief of Office thinks reasonable to issue the entry permit, the Chief of Office shall issue the entry permit in the format referred to in Schedule-2, in the case of plants or plant products, in the format referred to in Schedule-3 in the case of biological control agents or beneficial organisms, in the format referred to in Schedule-4 in the case of soil, moss, peat or other plant growing medium in the format referred to in Schedule-5 in the case of study and research of germplasm, living modified organisms, genetically modified organisms or transgenic substances.
- (4) If any person or body, showing a reason for not being able to obtain the import permit beforehand pursuant to sub-rule (1), makes an application, accompanied by the documents as referred to in sub-rule (2), at the point of entry for the entry permit, the Chief of Office may, if the reason for not being able to so obtain the permit beforehand is found reasonable, issue the permit pursuant to sub-rule (3) at the point of entry, upon collecting the fees of one thousand rupees.

Provided that no permit shall be issued at the point of entry pursuant to this sub-rule without the issue of the import entry permit for the purpose of research.

(5) A person or body who obtains the import entry permit pursuant to sub-rule (3) has to abide by the terms and restrictions relating to import as specified by the Ministry pursuant to sub-section (2) of Section 7 of the Act.

- (6) If, upon the examination pursuant to sub-rule (3), it does not appear appropriate to issue the entry permit for reason of insufficiency of the documents accompanied or otherwise, the Chief of Office has to give information in the format referred to in Schedule-6 to the applicant no later than seven days.
- 6. Provisions relating to renewal of entry permit: (1) A person or body who intends to renew the entry permit obtained pursuant to sub-rule (3) of Rule 5 has to make an application, in the format referred to in Schedule-7, to the Chief of Office who has issued such permit, prior to seven days of the expiration of the term of the entry permit.
  - (2) If, upon necessary examination of the application received pursuant to sub-rule (1), it appears reasonable to renew the entry permit, the Chief of Office may renew such entry permit for a maximum period of three months, upon collecting the fee of four hundred rupees.
- 7. Obtaining entry permit at entry point: (1) If a person or body, who brings at the point of entry plants, plant products, biological control agents, beneficial organisms or plant growing substance such as soil, moss, and peat with intent to import them into Nepal, pursuant to Section 7 of the Act, and intends to get quarantine related necessary measures be done and make their entry into Nepal, the person or body has to fill up the declaration form in the format as referred to in Schedule-8 and submit the form to the Office for the entry permit of such goods into Nepal.
  - (2) The declaration form submitted pursuant to sub-rule (1) has to be accompanied by the following documents:
    - (a) The import entry permit obtained pursuant to Rule (5),

- (b) The documents as referred to in pursuant to sub-rule (2) of Rule 5,
- (c) The phyto-sanitary certificate issued by the country exporting the goods, as referred to in sub-rule (1), which are intended to be imported.
- (3) If, upon necessary examination of the application received pursuant to sub-rule (1) and the documents accompanied by it, it appears reasonable to issue the entry permit, the Office shall obtain necessary sample of the goods to be imported and send the same to the laboratory for phytosanitary test.
- (4) If, upon laboratory test of the sample received pursuant to subrule (3), the imported **goods** are found to **be healthy**, the Office shall issue the clearance slip in the format as referred to in Schedule-9 for the entry of such goods into Nepal.
- (5) If, upon laboratory test of a sample received pursuant to subrule (3), such sample is found to contain quarantine pests, the imported goods have to be destroyed pursuant to rule 15, and if it is found unsafe due to other than quarantine pest, the imported goods shall be sent for treatment pursuant to Rule 13, or destroyed directly pursuant to Rule 15, at the request of the importer.
- (6) If, subsequent to the treatment carried out pursuant to Rule 13, the imported goods are found to be healthy, the Office shall issue the clearance slip pursuant to sub-rule (4) for the entry of such goods into Nepal.
- (7) If, even after the treatment carried out pursuant to Rule 13, the imported goods are found to be unhealthy, the Office shall either destroy

such goods pursuant to Rule 15 or return, or cause to be returned, such goods to the concerned country.

(8) Any plants, plant products, biological control agents and beneficial organisms imported for the purpose of research have to be tested at the post entry quarantine site, and if, on such test, such goods are found to be healthy, the Office shall permit their use in Nepal.

Provided that if such goods are found infected, they shall be destroyed pursuant to Rule 15.

- 8. Provisions relating to phyto-sanitary certificate: (1) A person or body who intends to obtain the phyto-sanitary certificate pursuant to sub-section (1) or (2) of Section 12 of the Act has to make an application, accompanied by the following documents and the fee of one hundred rupees and of two hundred rupees, in the case of export and re-export, respectively, in the format referred to in Schedule-10, to the Chief of Office:
  - (a) The certificate of origin of the goods to be exported,
  - (b) The clearance slip issued by the Department of Forests, in the case of forest products,
  - (c) A recommendation letter of the Department of Archaeology in the case of goods of archaeological importance,
  - (d) Invoice of the goods to be exported,
  - (e) Import permit issued by the importing country in the case of goods to be re-exported,

- (f) A duplicate copy of the phyto-sanitary certificate submitted while making import into Nepal in the case of goods to be reexported,
- (g) Official identity card of the exporter or a copy of the registration of organization and letter of assignment if someone is assigned for that act if export is made by such organization.
- (2) If, on receipt of the application pursuant to sub-rule (1), and upon making of necessary examination and inspection of the sample of goods to be exported, it appears appropriate to issue the phyto-sanitary certificate to the applicant, the Chief of Office shall issue the phyto-sanitary certificate in the format referred to in Schedule-11, in the case of export, and in the format referred to in Schedule-12 in the case of re-export.
- (3) If, upon making of necessary examination and inspection pursuant to sub-rule (2), it does not appear appropriate to issue the phytosanitary certificate, the Chief of Office shall give information thereof in the format referred to in Schedule-13 to the concerned applicant within seven days of the date of application.
- 9. Provisions relating to permit for carriage of consignments: (1) Any person or body who intends to carry to another country via the route of Nepal any consignments of plants and plant products or other articles intransit has to make an application, accompanied by the fees of one thousand rupees, to the Office, in the format referred to in Schedule-14.
  - (2) The application referred to in sub-rule (1) has to be accompanied by the following documents:

- (a) Import permit issued by the country importing the consignments,
- (b) Phyto-sanitary certificate issued by the country exporting the consignments,
- (c) Invoices of the consignments,
- (d) Means and mode of transport and route to be taken,
- (e) Certificate of origin of the goods in consignments.
- (3) If, upon examining the documents and consignments accompanied by the application received pursuant to sub-rule (1), as to whether they are in order and proper condition, the conditions referred to in sub-section (3) of Section 13 of the Act are found to exist, the Office shall issue the permit in the format referred to in Schedule-15 to carry such consignments to another country via the route of Nepal.
- (4) If, in the course of carrying any plants, plant products or other articles t another country via the route of Nepal pursuant to the permit issued under sub-rule (3), it is possible that the pests therein may come out or spread within Nepal due to damage for any reason, the person carrying such consignment has to immediately inform the nearby Office or District Agriculture Development Office or Agriculture Service Center.
- (5) If any information is received pursuant to sub-rule (4), the Office or District Agriculture Development Office or Agriculture Service Center has to immediately inspect such consignment and make necessary arrangement to prevent the spread of pests and notify thereof to the one level higher body or Office and Organization as soon as possible.

- (6) If the condition referred to in sub-rule (5) arises because of damage in the consignment being carried via the route of Nepal, such consignment shall be allowed to be carried only after so repacking it as to prevent the prohibited pests coming out. The concerned person or organization has to bear the expenses incurred in such repackaging.
- **10. Qualification of inspector:** In order for being designated as an inspector pursuant to Section 14 of the Act, one has to be a civil employee who is serving in the plant protection faculty of the Nepal Agriculture Service after doing at least bachelor level degree in agriculture science from a recognized educational institute or serving in the junior technician post of the same faculty and having gained at least five years of experience in the quarantine related work.
- 11. Inspection: (1) The inspector has to inspect any articles in consignment, bags, pouches or packets containing such articles or goods used for that purpose, containers and means of transport containing such articles whether any plants, plant products, biological control agents, beneficial organisms or other articles to be imported or exported are infected from pests.
  - (2) If, in the course of inspection carried out pursuant to sub-rule (1), the inspector finds that the articles subject to inspection contain soil, residues of plants or weeds or live organism or shows any symptoms of disease or any articles suspected of suffering from such disease, he or she has to order to treat the articles or make treatment thereof.
  - (3) If, in the course of inspection carried out pursuant to sub-rule (1), the inspector finds that the articles subject to inspection do not contain the matters referred to in sub-rule (2) or harbor any symptoms of disease or any articles suspected of suffering from such disease, he or she has to take

requisite sample of the articles in the consignment so carried and send it to the laboratory for test.

- (4) If, following the laboratory test of the sample taken pursuant to sub-rule (3), a report is received that the articles are healthy, such consignment has to be submitted for the issuance of permit to import or export such consignment.
- (5) If, on carrying out a laboratory test of the sample taken pursuant to sub-rule (3), there is a suspicion of being unsafe of the goods tested, the sample has to be sent to a sophisticated laboratory for rest-test. If the sample is so sent for re-test, the Office has to arrange for holding such consignment in the quarantine site until its laboratory report is received.
- (6) If the laboratory report of the articles sent for test pursuant to sub-rule (3) or (5) mentions that they are unhealthy, information thereof has to be given to the Organization and order has to be issued to treat them pursuant to Rule 13 or destroy them pursuant to Rule 15 or send them back to the concerned country in accordance with the direction of the Organization.
- **12. Methods of test:** (1) On receipt of the sample of consignment taken pursuant to sub-rule (3) or Rule 11 in the laboratory for test, its test has to be carried out following any or more of the following testing methods:
  - (a) Normal test: To carry out normal test by visualizing through eyes in order to find out whether the consignment is infected from pests.

- (b) Washing test: To test the consignment by washing it in clean water, mixed with required chemical in order to find out whether the consignment is infected by any fungi
- (c) **Test by filtering:** To test the consignment by using funnel and filter paper in clean water in order to find out whether the consignment contains any nematode.
- (d) Microscopic test: To test by using a microscope for the identification of pests.
- (e) X-ray test: To test by using an x-ray machine in order to find out possible internal infection in grains.
- **(f) Incubation test:** To test by holding it in an incubation machine with appropriate means for required time in order to find out fungi or bacteria, if any.
- **(g) Sowing test:** To test by sowing grains and plants in post entry quarantine sites in order to find out whether such grains and plants contain any hidden infection.
- (2) In carrying out test of articles other than those mentioned in sub-rule (1), required disinfection or treatment of such articles has to be carried out by way of normal test of the articles subject to test.
- **13. Methods of treatment:** If it is deemed necessary to treat any plants, plant products, biological control agents, beneficial organisms or other articles, the inspector has to disinfect or treat them by following any or more of the following methods:

- (a) Fumigation treatment: To carry out treatment by fumigation **method** in airtight condition/container at least for twenty four hours.
- **(b) Physical treatment**: To carry out treatment by physical method (for example cold, heat, ray) depending upon nature of the pest.
- **(c) Chemical treatment:** To carry out treatment by various chemical pesticides (for example dust, grains, liquid etc.).
- 14. Procedures for searching: (1) If the Inspector is required to search any testing site, storage or any other place pursuant to clause (c) of sub-section (1) of Section 15 of the Act, he or she has to make search in the presence of at least two local persons after giving a notice of search to the owner or the concerned person of the place to be searched.
  - (2) It shall be the duty of all the concerned to assist the Inspector in making search pursuant to sub-rule (1). If any person makes obstruction or hindrance during such search, the Inspector has to convince such person and enter and search the place.
  - (3) If any person makes obstruction or hindrance despite being convinced pursuant to sub-rule (2), the Inspector has to issue an order, accompanied also by possible consequences of such obstruction or hindrance, to that person not to make such obstruction or hindrance.
  - (4) If the person continues obstruction or hindrance despite the order referred to in sub-rule (3), the Chief of Office may, subject to penalty to such person pursuant to clause (d) of Section 23 of the Act.
  - (5) If, on making a search pursuant to this Rule, any plants, plant products, biological control agents, beneficial organisms or other articles are

found in the place searched, the Inspector has to prepare a bond setting out all details of such articles and get it signed by the owner of that place or concerned person and other persons present there and give a copy thereof to the concerned person and retain one copy with him or her in the file.

- (6) The Inspector has to take a sample in required quantity of the articles found pursuant to sub-rule (5), seal and sign it and get it signed also by the owner of the articles or concerned person and the person witnessing it and send it to the laboratory pursuant to sub-rule (3) of Rule 11 for the test of <a href="https://phyto-sanitation.org/phyto-sanitation">phyto-sanitation</a> of the sample. The Inspector has to take the remaining in his or her custody after taking sample or seal them in that place, according to the situation.
- (7) If the laboratory test of the articles sent for test pursuant to subrule (6) reveals that such articles are unsafe, order has to be issued to treat, destroy the articles or return such articles to the concerned country, pursuant to sub-rule (6) of Rule 11.
- (8) If no articles are found or irrelevant articles are found while searching any place pursuant to this Rule, the matter has to be mentioned in the bond and attached with the file.
- (9) If, on making search, the Inspector has to take any articles in his or her custody pursuant to sub-rule (6), a receipt indicating, inter alia, the articles to be taken into custody, quantity, number and condition of such articles has to be prepared, and one copy of the receipt has to be given to the owner of such articles or concerned person and the other copy attached with file.

- 15. Procedures to destroy: If any plants, plant products, biological control agents, beneficial organisms or other articles are to be destroyed pursuant to the Act and this Regulation for the reason that such articles cannot be treated or for any other reason, the Inspector has to destroy such articles in accordance with the following procedures:
  - (a) To isolate the articles to be destroyed so as to prevent further spread/infection,
  - (b) If, in view of the nature and quantity of the articles held pursuant to clause (a), they are to be buried, to use necessary chemicals and if they are to be burnt, to arrange for appropriate place,
  - (c) To put the articles to be buried pursuant to clause (b) or the ash remaining after burn in a hole and cover it with soil.
- **16. Functions, duties and powers of Inspector:** In addition to the functions, duties and powers specified in the Act and elsewhere in this Regulation, the functions, duties and powers of the Inspector shall be as follows:
  - (a) To monitor as to where the terms and restrictions specified in relation to the transportation and use of plants, plant products, biological control agents, beneficial organisms or other articles have been followed and cause such terms and restrictions to be followed if they are not found to have been followed,
  - (b) To assist the Organization in the identification of pest free area, pest free production site and area of low pest prevalence.

### 17. Matters to be done in event of non-observance of terms and restrictions:

(1) If any plants, plant products, biological control agents, beneficial

organisms or other articles imported by any person or body do not conform to the terms and restrictions specified by the laws in force, the Office has to immediately give a notice thereof to the Organization for direction to allow entry of such articles after treatment or to destroy them or return them to the concerned country.

- (2) If a notice is received pursuant to sub-rule (1), the Organization has to give information thereof to the national plant protection organization of the concerned country and give necessary direction to the concerned Office for action required to be taken in relation to such articles.
- (3) The Office has to destroy any articles or return such articled to the concerned country in accordance with the direction received from the Organization pursuant to sub-rule (2).
- **18. Amount to be deposited:** In specifying the amount for the purposes of Section 26 of the Act, the Office may order to deposit fifty percent of the amount indicated in the bill, invoice of the articles to be imported.
- 19. Procedures relating to investigation and inquiry: (1) If information is received by the Office from any person or through any medium that any act that is considered as offense under this Act has been committed or if, in the course of inspection or test of articles, any act that is considered as offense under this Act is found committed, the Inspector has to maintain records thereof in the Office and immediately initiate necessary investigation and inquiry in a manner that the evidence is preserved.
  - (2) In the course of investigation of and inquiry into an offense, the Inspector may require the concerned person to produce necessary documents and details of goods related therewith, take deposition of that person, collect

evidence, and if the Inspector deems necessary to examine the received documents and articles, he or she has to cause the maintenance of status quo of such articles and take required sample of such articles and test or cause to be tested the sample.

- (3) Where any articles have been sent for test pursuant to sub-rule (2) and the test report proves that such articles are healthy or such articles become healthy following treatment pursuant to Rule 13, a deposit of the amount of bills, invoices of such article has to be taken, and auction such articles if they are of perishable nature, and take control of and safely retain the articles upon giving a receipt thereof to the concerned person if they are not of perishable nature.
- (4) If the test report of the articles sent for test pursuant to sub-rule (3) indicates that such articles are infected and cannot be treated or if the articles are found to contain quarantine pests or are prohibited under the Act and this Regulation, such articles have to be seized and destroyed pursuant to Rule 15.
- (5) Upon collection of requisite evidence and documents pursuant to this Rule, the Inspector has to frame a charge sheet in the format as referred to in Schedule-16 and send the case file containing all documents to the District Government Attorney of the concerned District pursuant to subsection (3) of Section 27 of the Act.
- (6) Upon receipt of advice from the Government Attorney pursuant to sub-rule (5), the Inspector shall accordingly file the case with the case trying authority.

- **20.** Case trying authority: (1) The senior plant quarantine officer of the concerned field shall try and settle cases relating to the offences under the Act.
- **21. Power to frame and enforce manual:** (1) The Ministry may frame and enforce necessary manuals on phyto-sanitary measures.
  - (2) It shall be the duty of all the concerned to abide by the manuals issued pursuant to sub-rule (1).
- **22. Power to alter Schedules:** The Ministry may, by a notification in the Nepal Gazette, make necessary alteration in the Schedules.
- **23.** Repeal and saving: (1) The Plant Protection Regulation, 2031 is hereby repealed.
  - (2) Any acts done and action taken pursuant to the Regulation referred to in sub-rule (1) shall be deemed to have been done or taken under this Regulation.

# (Relating to sub-rule (1) of Rule 5)

# Format of application for entry permit

**Registration number** 

(For the purpose of Office only)

To,					
The	Chief of Office,				
	Re: Request for entry permit.				
I/we.	(name of importer), being desirous of importing the following				
article	es, hereby make this application, accompanied by the required fees, for the				
entry	permit pursuant to Section 8 of the Plant Protection				
Act, 2	2007 and sub-rule (1) of Rule 5 of the Plant Protection Regulation, 2010.				
1.	Description of goods to be imported:				
	(a) Seeds, propagating plant/plant products:				
	(b) Consumable items:				
	(c) Laboratory specimen, biological control agent, beneficial organism:				
	(d) Others (Please specify):				
2.	Importer's name and address:				
3.	Registration number/agency:				
4.	PAN No.:				

5.	Identity number (passport or citizenship certificate number):
6.	Exporters name and address:
7.	Scientific name of articles:
8.	Common name of articles:
9.	Variety:
10.	Quantity/volume (gross weight): Metric tonKgGramsunits
11.	Quantity/volume (net weight): Metric tonKgGramsunits
12.	Country of origin:
13.	Country of shipment:
14.	Foreign port of shipment:
15.	Entry point:
16.	Number and description of packages:
17.	Identification mark:
18.	Type of conveyance: Ship Aircraft Road vehicle Train Passenger vehicle
19.	Name of conveyance:
20.	Date of arrival:
21.	Final destination:
22.	Reason for import:
	Declaration

I/we hereby declare that the above-mentioned details are true and complete to the best of my/our knowledge and information, I/we shall furnish all the relevant

information	and o	concerned	documents	required	for the	issue	of the	entry	permit
and I/we agre	ee to	abide by the	he direction	s set forth	in the	entry p	ermit.		

Date: Applicant's:

Place: (Seal of agency if importer is agency) Signature:

Post:

(Relating to sub-rule (3) of Rule 5)

# Format of entry permit of plants or plant products

# Government of Nepal Ministry of Agriculture and Cooperatives Department of Agriculture Plant Protection Directorate National Plant Quarantine Program

.....Office

# **Entry permit of plants or plant products**

# Entry permit number:

This entry permit is hereby issued to the following importer, pursuant to Section 8 of the Plant Protection Act, 2007 and sub-rule (3) of Rule 5 of the Plant Protection Regulation, 2010, to import into Nepal the following plants or plant products on the following terms and conditions.

Importer's nam	e and	Exporter's	name	and		
address		address				
Description of plants or plant products to be imported:						
Country of origin		Objective/en	d use		Transit country (ies)	

Point of entry	Final destination	
Scientific name Common	name Variety	Quantity (weight/number)

Terms and conditions of import:

- (1) The consignment of plants or plant products has to be free from soil, seeds of weeds and other infection.
- (2) Such consignment has to be accompanied by the authentic phyto-sanitary certificate.

Special terms and conditions for entry/additional declaration:

Period:	Fromto					
Date of issue:						
Validity period:						

Place of issue:

Post entry quarantine requirements:

Seal of Office issuing permit Permit issuing authority's:

Signature:

Name, surname:

Post:

Date:

## (Relating to sub-rule (3) of Rule 5)

# Format of entry permit of biological control agents, beneficial organisms

# Government of Nepal Ministry of Agriculture and Cooperatives Department of Agriculture Plant Protection Directorate National Plant Quarantine Program

.....Office

## Entry permit of biological control agents, beneficial organisms

## Entry permit number:

This entry permit is hereby issued to the following importer, pursuant to Section 8 of the Plant Protection Act, 2007 and sub-rule (3) of Rule 5 of the Plant Protection Regulation, 2010, to import into Nepal the following biological control agents and beneficial organism, on the following terms and conditions.

Importer's	name	and	Exporter's	name	and	
address			address			
Description of biological control agents, beneficial organism to be imported:						

Country of	origin	Reason for import	Transit country (ies)		
Point of ent	ry	Final destination			
Scientific n	ame Commo	n name Classif	ication		
Stage of gro	wth Num	nber of specimen/unit	Method of packaging		
Identification	n mark of pacl	kage			
Terms and	conditions of	import:			
(1) The c	onsignment ha	s to be free from infecti	on.		
, ,	The consignment has to be accompanied by the authentic phyto-sanitary certificate.				
	-	-	al lines of importing products to the competent authority of the		
count	ry of origin ha	s to be submitted if so r	equired.		
Date of issu	e:				
Validity per	iod:				
Place of iss	ıe:				
	Seal of	Office issuing permit	Permit issuing authority's:		
			Signature:		
			Name, surname:		
			Post:		
			Date:		

(Relating to sub-rule (3) of Rule 5)

# Format of entry permit of soil, moss, peat or other plant growing means Government of Nepal

**Ministry of Agriculture and Cooperatives** 

**Department of Agriculture** 

**Plant Protection Directorate** 

**National Plant Quarantine Program** 

.....Office

### Entry permit of soil, moss, peat or other plant growing means

### Entry permit number:

This entry permit is hereby issued to the following importer, pursuant to Section 8 of the Plant Protection Act, 2007 and sub-rule (3) of Rule 5 of the Plant Protection Regulation, 2010, to import into Nepal the following soil, moss, peat or other plant growing means, on the following terms and conditions.

Importer's name and	Exporter's name and address		
address			
Items to be imported:			
Country of origin	Objective/end use	Transit country (ies)	

Point of entry	Final destination	
Description of articles Q	uantity (weight/number)	
Number of packages N	Method of packaging	

# Terms and conditions of import:

- (1) The soil, moss, peat or other plant growing means have to be free from weed seeds, plant residues and infection.
- (2) The consignment has to be accompanied by the authentic phyto-sanitary certificate.
- (3) The consignment has to be retained in a safe place so that it cannot spread out.
- (4) In the case of import for study and research, it has to be removed or destroyed after completing research/studies in accordance with the order issued by the Quarantine Officer or Inspector.
- (5) The soil to be imported has to be free from any harmful organism.

Special terms	and conditions/	Additional	declaration	of import:
Date of issue:				

Validity period:

Place of issue:		
	Seal of Office issuing permit	Permit issuing authority's
		Signature:
		Name, surname:
		Post:
		Date:

(Relating to sub-rule (3) of Rule 5)

# Format of entry permit of germ-plasm/living modified organism/genetically modified organism/transgenic substance

### **Government of Nepal**

**Ministry of Agriculture and Cooperatives** 

**Department of Agriculture** 

**Plant Protection Directorate** 

**National Plant Quarantine Program** 

# Entry permit of germ-plasm/living modified organism/genetically modified organism/transgenic substance

### Entry permit number:

This entry permit is hereby issued to the following importer, pursuant to Section 8 of the Plant Protection Act, 2007 and sub-rule (3) of Rule 5 of the Plant Protection Regulation, 2010, to import into Nepal the following germ-plasm /living modified organism/genetically modified organism/transgenic substance, on the following terms and conditions.

Importer's	name	and	Exporter's name and address	
address				

Country of origin	Objective/end use	Transit country (ies)			
Point of entry	Final destination				
Generic/botanical name Quantity (weight/number)					
Method of packaging/Identification mark of package					
Address of post entry quarantine site:					
Name and address of study undertaker:					
Period (days/months):Fromto					

# Terms and conditions of import:

- (1) The consignment has to be free from soil, seeds of weeds and plant residues.
- (2) The consignment has to be accompanied by the authentic phyto-sanitary certificate.
- (3) The importer has to sow in a recognized place with post entry quarantine facilities.

Date of issue:

Validity period:

Place of issue:

Seal of Office issuing permit Permit issuing authority's:

	Signature:		
	Name, surname:		
	Post:		
	Date:		
National Plant Quarantine Program, PO Box No. 12253, Kathmandu, Nepal.			
Telephone: Fax No			
Email:			

## (Relating to sub-rule (6) of Rule 5)

# Format of information to be given in the case of inappropriateness to issue entry permit

Government of Nepal

Ministry of Agriculture and Cooperatives

Department of Agriculture

Plant Protection Directorate

National Plant Quarantine Program

......Office,

10,	
Mr./Ms	
•••••	

# Re: Notification of rejection of entry permit

Whereas, upon taking action on the application made by you to this Office for the issue of entry permit to import the following articles, it does not appear appropriate, on the following grounds and reasons, to issue the entry permit to import such articles;

Now, therefore, information to that effect is hereby given pursuant to sub-section (3) of Section 8 of the Plant Protection Act, 2007 and sub-rule (6) of Rule 5 of the Plant Protection Regulation, 2010.

- 1. Number of application made for the issue of entry permit and date thereof:
- 2. Description of articles intended to be imported:
  - (a) Name of articles:
  - (b) Quantity (weight/number):
  - (c) Number of packages:
  - (d) Identification mark:
  - (e) Name of exporting country:
  - (f) Invoice number:
- 3. In the case of application for entry permit for articles carried at entry point:
  - (a) Date of inspection of such articles:
  - (b) Place of inspection:
  - (c) Description of consignment:
- 4. Grounds and reasons for refusing to issue the entry permit:
  - (a) Consignment being prohibited (clearly specify the consignment and the law imposing prohibition):
  - (b) Import not being in conformity with the terms and restrictions (specify which terms and restrictions are not complied with):
  - (c) Treatment not being available (clearly specify what treatment was to be done and such treatment is not available within Nepal and even if available, whether it is economically feasible or not):

(e) Specify other reasons, if any:		
Date:	Decision making authority's:	
Seal of Office:	Signature:	
	Name, surname:	
	Post:	

(d)

documents are missing):

Documents not being sufficient or authentic (specify which

#### (Relating to sub-rule (1) of Rule 6)

# Format of application for the renewal of entry permit

	Application number:
	(Only for the purpose of Office)
То,	
The Chief of Office,	

# Re: Application for the renewal of entry permit.

Whereas, the term of the entry permit obtained by me/us from this Office to import the following articles is going to expire on......(date), and I/we intend to get the entry permit renewed;

Now, therefore, I/we hereby make this application, accompanied by the issued entry permit, for the renewal of the entry permit, pursuant to Section 10 of the Plant Protection Act, 2007 and Rule 6 of the Plant Protection Regulation, 2010.

- 1. Number of the issued entry permit:
- 2. Date and place of issue:
- 3. Reason for the renewal of permit:
  - It will take to make import:
  - Articles are yet to arrive at the entry point within the term of permit:
  - Others (please specify)

#### **Declaration**

The above-mentioned details are true and complete to the best of my/our knowledge and information. I/we shall furnish all such relevant information and concerned documents as may be demanded by the Office for the renewal of the entry permit.

Date:		Applicant's:
Place:	(Seal of agency if importer is agency)	Signature:
		Name:

Post:

# (Relating to sub-rule (1) of Rule 7)

# Format of application to be made at entry point for entry permit

**Application number** 

(For the purpose of Office only)

Re: Application for entry permit to make import.

To,

The	Chief of Office,	
Whe	reas, a consignment containing the plants, I	plant products, biological control
agen	ts, beneficial organisms or plant growing me	ans with the following details has
arriv	ed atpoint for import into Nepal;	
Now	, therefore, I/we hereby make this applic	cation for the inspection of the
	ignment and issue of entry permit pursu	<del>-</del>
Prote	ection Act, 2007 and Rule 7 of the Plant Prote	ection Regulation, 2010.
1.	Importer's name and address:	
2.	Exporter's name and address:	
3.	Description of goods carried at entry point	
	for import:	
	(a) Seeds, breeding plants:	
	(b) Consumable items:	

	(c) Laboratory specimen, biological	
	control agent, beneficial organism:	
	(d) For research, study	
	(d) Others (Please specify):	
	Scientific name of articles:	
	Common name of articles:	
	Variety:	
	Quantity/volume (gross weight): Metric	
	tonKgGramsunits	
4.	Country of origin	
5.	Country of shipment	
6.	Entry permit number	
7.	Phyto-sanitary certificate number	
8.	Foreign port of shipment	
9.	Point of entry into Nepal	
10.	Number and description of packages:	
11.	Identification mark:	
12.	Type of conveyance:	Ship/ aircraft/road vehicle/
		train/ passenger vehicle
13.	Name of conveyance:	
14.	Date of arrival:	
_		

15.	Final destination:	

#### **Declaration**

The above-mentioned details are true and complete to the best of my/our knowledge and information. I/we shall furnish all such relevant information and concerned documents as may be demanded by the Office for the issue of the entry permit.

Date: Applicant's:

Place: (Seal of agency if importer is agency) Signature:

Name, surname:

Post:

(Relating to sub-rule (4) of Rule 7)

Format of clearance slip

**Government of Nepal** 

**Ministry of Agriculture and Cooperatives** 

**Department of Agriculture** 

**Plant Protection Directorate** 

**National Plant Quarantine Program** 

Office
Clearance Slip

To,

Exporter's name and address

Common name

Clearance slip order number:

Number

of

Mr./Ms
(importer's name and address).
Whereas, the following articles intended to be imported by you through this point
are not found contrary to the Plant Protection Act, 2007 and Plant Protection
Regulation, 2010;
Now, therefore, this clearance slip is hereby issued to import the articles into
Nepal, pursuant to sub-rule (4) of Rule 7 of the Plant Protection Regulation, 2010.
Of the articles in respect whereof the clearance slip is issued:

Quantity

Scientific name

		packages
	Number and date	of application for
	entry permit	
	Entry point	
Validity period of	Phyto-sanitary	Date of arrival
entry permit	certificate number	
Identification mark	Name, number and t	ype of conveyance
ents of clearance slip	:	
Seal of Office	Clearance slip order	issuing authority's:
	Signature:	
	Name, surname:	
	Post:	
	Identification mark ents of clearance slip	entry permit  Entry point  Validity period of Phyto-sanitary certificate number  Identification mark Name, number and tents of clearance slip:  Seal of Office Clearance slip order Signature: Name, surname:

#### (Relating to sub-rule (1) of Rule 8)

## Format of application for phyto-sanitary certificate

**Application number** 

(For the purpose of Office only)

To,	
The Chief of Office,	

# Re: Application for phyto-sanitary certificate.

Whereas, I/we intend to export/re-export the following plants, plant products, biological control agents, beneficial organisms with the following details;

Now, therefore, I/we hereby make this application pursuant to sub-section (3) of Section 12 of the Plant Protection Act, 2007 and Rule 8 of the Plant Protection Regulation, 2010.

- 1. Exporter's name and address:
- 2. Registration number/agency:
- 3. PAN No.:
- 4. Evidence of identity (passport or citizenship certificate number):
- 5. Name and address of consignee of plants or plant products:
- 6. Scientific name of articles:
- 7. Common name of articles:
- 8. Description of articles:

- 9. Quantity/volume (gross weight): Metric ton.....Kg.....Grams.....units....
- 10. Quantity/volume (net weight): Metric ton.....Kg.....Grams.....units....
- 11. Importing country:
- 12. Declared entry point:
- 13. Number and description of packages:
- 14. Identification mark:
- 15. Objective/end use:

Breeding, timber, industrial product, consumption, dunnage (wood packaging materials), laboratory sample, micro-organism, microbiological, biological control agent, beneficial organisms or other, if any.

- 16. Type of conveyance: Ship Aircraft Road vehicle Train Passenger vehicle
- 17. Name of conveyance:
- 18. Date of departure:
- 19. Date and place of intended inspection:
- 20. Additional declaration (as per the requirement of the importing country):
- 21. Description of treatment done prior to the application.

#### **Declaration**

- 1. I/we hereby declare that the above-mentioned details are true and complete to the best of my/our knowledge and information.
- 2. I/we shall abide by the directions issued by the Plant Quarantine Officers of the National Plant Quarantine Program in relation to such

inspection/fumigation/treatment of the consignment as required for the issue of phyto-sanitary certificate.

3. I/we shall furnish all relevant information and concerned documents which are relevant to the export of consignment and required for the issue of the phyto-sanitary certificate.

Date:		Applicant's:
Place:	(Seal of exporter/representative)	Signature:
		Name:
		Post·

(Relating to sub-rule (2) of Rule 8)

Format of phyto-sanitary certificate

Government of Nepal

Ministry of Agriculture and Cooperatives

Department of Agriculture

Plant Protection Directorate

National Plant Quarantine Program

Phyto-sanitary certificate

.....Office

Certificate number:

From the Plant Protection Organization of Nepal to.......Plant Protection Agency

# 1. Description of consignment:

Exporter's name and address:

Name and address of consignee of plants or plant products:

Number and description of packages:

Objective/end use:

Identification mark:

Place of origin: Nepal

Type of conveyance: Declared entry point: Name of product and declared quantity: Scientific name of plants: This is to certify, upon the inspection, examination and test of the above-mentioned plants and plant products or other regulated articles in accordance with the formal procedures, that they are free from quarantine pests as mentioned by the importing country and they conform to the importing country's phyto-sanitary requirements and controlled nonquarantine pests. **Additional declaration: Disinfection/disinfection treatment:** Date of treatment: Treatment: Chemical (active ingredients): Duration and temperature: Additional information: Concentration: Date of inspection: Date of issue: The consignment has to be exported no later than five days of ......(date).

2.

**3.** 

Place of issue:

Seal

Certificate issuing authority's:

Signature:

Name:

Post:

(Relating to sub-rule (2) of Rule 8)

## **Government of Nepal**

**Ministry of Agriculture and Cooperatives** 

**Department of Agriculture** 

**Plant Protection Directorate** 

**National Plant Quarantine Program** 

.....Office

# Plant re-export phyto-sanitary certificate

Certificate number:

From the Plant Protection Organization of Nepal to.......Plant Protection Agency

# 1. Description of consignment:

Exporter's name and address:

Name and address of consignee of plants or plant products:

Number and description of packages:

Objective/end use:

Identification mark:

Place of origin: Nepal

Type of conveyance:

Declared entry point:

Name of product and declared quantity:

Scientific name of plants:

This is to certify, upon the inspection, examination and test of the above-mentioned plants and plant products or other controlled articles in accordance with the formal procedures, that they are free from quarantine pests as mentioned by the importing country and they conform to the importing country's phyto-sanitary requirements and controlled non-quarantine pests.

#### 2. Additional declaration:

#### 3. Disinfection/disinfection treatment:

Date of treatment:		Treatment:
Chemical (active ingre	edients):	Duration and temperature:
Concentration:		Additional information:
Date of inspection:		
Date of issue:		
The consignment has to be exported no later than five days of		
Place of issue:	Seal	Certificate issuing authority's:
		Signature:
		Name:
		Post:

#### (Relating to sub-rule (3) of Rule 8)

# Format of information to be given in the case of inappropriateness to issue Phyto-sanitary certificate

**Government of Nepal** 

Ministry of Agriculture and Cooperatives

**Department of Agriculture** 

**Plant Protection Directorate** 

**National Plant Quarantine Program** 

.....Office

То,		
Mr./Ms		

# Re: Information given to the effect that it does not appear appropriate to issue the phyto-sanitary certificate

Whereas, upon taking action on the application made by you to this Office for the issue of phyto-sanitary certificate to export the following plants, plant products, biological control agents and beneficial organisms, it does not appear appropriate, on the following grounds and reasons, to issue the phyto-sanitary certificate as demanded:

Now, therefore, information to that effect is hereby given pursuant to sub-rule (3) of Rule 8 of the Plant Protection Regulation, 2010.

Description of articles in re	espect whereof phyto-sanitary	y certificate is requested:		
Articles	Quantity(weigh/number)	Number of packages		
Identification mark	Exporting country	Invoice number		
Date of inspection	Place of inspection	Description of consignment		
<ul> <li>Reasons for voidance:</li> <li>Failure to conform to the importing country's import terms and conditions</li> <li>Treatment not being effective</li> <li>Documents being insufficient or unauthentic</li> </ul>				
• Others				
Date:	Decision r	naking authority's:		
Seal of Office:	_	nature:		
	Nai Post	me, surname:		

# (Relating to sub-rule (1) of Rule 9)

# Format of application for permit to carry consignment in transit

**Application number** 

(For the use of Office only)

To,		
The C	Chief o	of Office,
	• • • • • • •	······································
Re: I	Reque	st for permit to carry consignment in transit via the route of Nepal
		we have to carry the following consignment of plants, ets or other products in transit to another country via the roué of Nepal;
pursu	ant t	fore, I/we hereby make this application for the permit to that effect, o sub-section (1) of Section 13 of the Plant Protection and sub-rule (1) of Rule 9 of the Plant Protection Regulation, 2010.
1.	Descr	ription of articles in consignment:
	(a)	Seeds, breeding plants:
	(b)	Consumable items:
	(c)	Laboratory specimen, biological control agent, beneficial organism:
	(d)	Others (Please specify):
2.	Expo	rter's name and address:
3.	Regis	tration number/agency:

4.	PAN No.:				
5.	Identity number (passport or citizenship certificate number):				
6.	Consignee's name and address:				
7.	Scientific name of articles:				
8.	Common name of articles:				
9.	Variety:				
10.	Quantity/volume (gross weight): Metric tonKgGramsunits				
11.	Quantity/volume (net weight): Metric tonKgGramsunits				
12.	Country of origin:				
13.	Country of shipment:				
14.	Foreign port of shipment:				
15.	Entry point:				
16.	Number and description of packages:				
17.	Identification mark:				
18.	Type of conveyance: Ship Aircraft Road vehicle Train				
	Passenger vehicle				
19.	Name of conveyance:				
20.	Date of arrival:				
21.	Final destination:				
	Declaration				

I/we hereby declare that the above-mentioned details are true and complete to the

best of my/our knowledge and information. I/we shall furnish all such relevant

information and concerned documents as required for the issue of the permit to carry the consignment and demanded by the Office.

Date:	Applicant's:

Place: (Seal of agency if importer is agency) Signature:

Name, surname:

Post:

(Relating to sub-rule (3) of Rule 9)

## Format of entry permit to carry consignment in transit

## **Government of Nepal**

**Ministry of Agriculture and Cooperatives** 

**Department of Agriculture** 

**Plant Protection Directorate** 

**National Plant Quarantine Program** 

	•								••	O	ffi	C	e
--	---	--	--	--	--	--	--	--	----	---	-----	---	---

Permit	num	ber

To,				
Mr./Ms	 	. <b></b> .	 	

#### Re: Permit.

Upon action on the application made by you for the permit to carry the consignment of the following plants, plant products or other articles in transit to......(country) via the rout of Nepal, this permit, subject to the following terms and conditions, is hereby issued to carry the consignment via the route of Nepal, pursuant to sub-section (3) of Section 13 of the Plant Protection Act, 2007 and sub-rule (3) of Rule 9 of the Plant Protection Regulation, 2010.

- 1. Importer's name and address:
- 2. Exporter's name and address:
- 3. Description of plants, plant products or other articles:

	(b)	Scientific name:			
	(c)	Quantity:			
	(d)	Number of packages:			
4.	Coun	try of origin:			
5.	Bill a	nd date of entry number:			
6.	Point	of entry:			
7.	Date	of inspection:			
8.	Impo	rt permit number:			
9.	Valid	ity period of import permit:			
10.	Number of phyto-sanitary certificate:				
11.	Date of arrival:				
12.	Objective:				
13.	End use:				
14.	Identi	fication mark:			
15.	Type	and number of conveyance:			
16.	Speci	al terms/comments on the carria	age of consignment in transit:		
Place	and da	ate of issue:			
	Seal	of Office	Permit issuing authority's:		
			Signature:		
			Name, surname:		
			Post:		

(a)

Common name:

# (Relating to sub-rule (5) of Rule 19)

# Format of charge sheet

1 of mat of char	ge sheet
	Registration number
	(To be filled in by Office)
Filed with the case trying authority Mr	, pursuant to sub-
section (1) of section 27 of the Plant Protectio	n Act, 2007.
Charge sh	eet
Numberof the	ne year
The Government of Nepal	-Plaintiff
Versus	
1	
2	
3	-Defendant
Case:	
Description of case:	
1.	
2.	
3.	
Charge	
Proofs and evidences:	
Proofs, evidence, exhibits and articles related	with offense:

Witness:	
Eye:	
(a)	
(b)	
(c)	
(d)	
Hearsay:	
(a)	
(b)	
Exhibits or other articles of evidentiary value with offense:	
(a)	
(b)	
(c)	
Documents furnished:	
(a)	
(b)	
(c)	
The court is humbly prayed to institute proceedings with this charge shee	et.
Seal of Office: Inspector's:	
Signature:	
Name:	

-	•	. •
1 100	1000	t10nº
レしい	12116	ition:
	-0	

Office:

Date:

Note: (1) Names, surnames and address of all those found accused from investigation have to be mentioned in the versus column in serial order.

(2) In the case of proofs and documentary evidence, they have to be mentioned in the above-mentioned format.

# la?jf; AlfOf lgodfj nl, @)^^

la?jf; AlfOf Pg, @)^\$ sf]bkmf #% n]lbPsf]clwsf/ k $\phi$ fijı u/l g|kfn; /sf/n]b|kfosf lgodx? agfPsf]5.

#### kI/R5**b**-!

## k¶/IDes

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  - -u\_ lj?jf jf lj?jfhGo pkhsf]k/LlfOf, pkrf/ jf cg; Gwfg ug{lghl:t/af6 :yflkt v08 -v\_ adf]hdsf]dfkb08 k/fePsf k\psifj\zfnfnfO{o; lgodfj nlsf]k\psifj\ngsf] nflu tf\qqsf]nflu g\ranglefn ; /sf/ ; dlf l; k\nfl/; ug\ranglef

- -3\_ hlljt kl/dflh{ j:t; cgjflzs kl/dflh{ j:t'jf 66; hlgs kbfy\$f]kj}zaf6 la?jfdf kg{; Sg]hflvdsf]Joj:yfkgsf nflu cg; Gwfg sfo{nf0{kfl}; fxg ug}
- -a\_ lgoldt zqhljsf] lgoldt cWbog, cg; Gwfg tyf cgudg u/l ; f] ; DaGwl ; \mathbb{c}gx? cBfj lws u/l ; DalGwt lgsfo jf ; :\mathbb{y}fnf0{hfgsf/l u/fpg]}
- -r\_ gkfnsf]sg}Ps Ifqdf zqhLjsf]kj} ePdf cGo Ifqdf To;sf]knjnfj6 /fsg oyflz3|cfjZos lgoGqOffTds kstofx? ckgfO{;DalGwt lgsfo jf; ;yfnfO{ hfgsf/L u/fpg]
- -5\_ Sj f/[6f0g] zqhlj x?sf]kinfj 6af6 cfly[s] xflg gf[s]; fgl xg; Sg]cj:yf b[s]vPdf lgo[s]q0fsf nflu cf[s]tl/s Sj f/[s]6f0[g] nfu"ug[s]
- -h\_ cGt/f[[6@:t/df ckgf0Psf dfkb08 cgsh xg] u/l la?jf :j:ytf ; DaGwl sfo[j lw tyf dfkb08 tof/ u/l nfu"ug[u/fpg]
- -em Pg tyf o; Igodfjnl adf¶hd Igwfl/t dfkb08 k/f u/\$f Ighl :t/sf k\psif\u2fnf, kf]6 006\k Sjf/\u2fnf0f0g :yn, sd zqhlj ;\u2fnf0 tf\u2fnf0 jf pkrf/slfnf0{df\u2ft\u2fnf0f0f k\psif ug{g\u2flfn ; /sf/ ; dlf l; k\u2fl/; ug\u2fl
- -`\_ kfilo 006k; lj wf, k/Llf0f s(lb,| kφfiluzfnf / pk rf/ kllqmof; Da6wL sfo{ug\sf nflu lghL lf\gnf0{; d}; kfil; fxg ug{
- -6\_ lgoft kj 4gsf nflu u0f:t/Lo pTkfbgnf0{kf]; fxg ug{c; n stif sfotj lw -u8 PullsNr/ kflS6; th\_:jLst u/f0{nfu"uqt.

# kI/R5**]**)-#

# kj≱ cgdltkq ; DaQwl Aoj:yf

\[
\kappa\_\fill kj\gamma cgdltkqsf \text{ nflu lgj\bg lbg\mathbg} \]
\[
\kappa\_\fill kj\gamma cgdltkqsf \text{ nflu lgj\bg lbg\mathbg} \]
\[
\kappa\_\fill la?jf \text{ kg} \]
\[
\fill la?jf \text{ kg} \text{ kg} \]
\

t/ To:tf]j:t'cg; Gwfg k\pflhgsf]nflu k\f\f\ ug\fendsf]k\d\v ; dIf lbg'kg\fi.

- -@\_ pklgod -!\_ adf¶hd lgj þg lbbf lgj þgsf]; fy b}fosf sfuhftx? ; mllg ug{kg}}₩
  - -s\_ k]f/lstf\f]gful/stfsf]k\f0fkqjf/fxbfglsf]k\f\tinlk,
  - -v\_ ; +yfsf] gfdaf6 k]/f/L ug{ rfxg]h] To:tf] ; +yf btf{ / gjls/0f u/}sf] k\psif0fsf]k||tlnlk,

- -3\_ alp lj hg k]f/L ul/g]eP alp lj hg u0f:t/ lgoGq0f s[b\$f]l; kmfl/; ,
- -a\_ cg; Gwfgsf] nflu k}f/L ul/g] eP cg; Gwfg ug{ JolQm jf ; :yfsf] cg/flykq / glkfn s[if cg; Gwfg kl/ifbaf6 u/sf]l; kmfl/; .
- -#\_ pklgod -!\_ adfi]hd kfkt lgj  $\$ g ; fy ; mlg sfuhft hfFaem ubf{sfoffno k $\$ d\n] kj $\$ z cgdltkq lbg dgfl; a b $\$ dfl la?jf jf la?jfhGo pkhsf] nflu cg';  $\$ l-@ adfi]hdsf] 9fFfdf, jfofi]hflnsn sG6fd Ph[G6 jf nfebfos sl/fsf]nflu cg';  $\$ l-# adfi]hdsf]9fFfdf, df6f] %ofp, kl6 jf cGo la?jf x $\$ g]df\lodsf nflu cg';  $\$ l-\$ adfi]hdsf]9fFfdf / hd\[nfld, hllj t kl/dflh{t} j:t' jf 6fG; hlgs kbfy{sf} c\loog cg'; Gwfgsf] nflu cg';  $\$ l-% adfi]hdsf]9fFfdf kj $\$ z cgdltkq lbg{5} .
- -\$\_ sg}JolQmjf; :\u00e4yfn]pklgod -!\_ adf¶hd culd ?kdf k}f/L cgdltkq lng g; s\u00e4f] sf/0f b\u00e4yf0{pklgod -@\_ adf¶hdsf sfuhftx? ; \u00e4lg u/L kj\u00e4 gfsfdf g}kj\u00e4 cgdltkq lng lgj\u00e4g lbPdf To; /L culd ?kdf cgdlt lng g; s\u00e4f]sf/0f dgfl; a b\u00e4\u00e4 pfsfof\u00e4o k\u00e4\u00e4n]Ps xhf/ ?k\u00e4f b:t\u00e4 ln0{kj\u00e4 gfsfdf pklgod -\u00e4\_ adf¶hd cgdltkq lbg ; \$g\u00e4 .
- t/ cg;  $wfgsf]k\phifhgsf]nflu k]f/L kj½ cgdltkq gln0<math>g$ 0; pklgod adflhd kj½ gfsfaf6 cgdltkq lb0g15g3.
- -%\_ pklgod -#\_ adf¶hd k¶f/L kj $\$  cgdltkq kf%t ug{JolQmjf; :+yfn]Pgsf]bkmf & sf]pkbkmf -@\_ adf¶hd dGqfnon]tf\$\$f]k¶f/L; DaGwL zt{tyf aGb¶hsf]kfngf ug{kg $\$  .
- -^\_ pklgod -#\_ adfind hfFaem ubf{; mlg ul/Psf sfuhft ckoff(t ePsf]jf c6o sf/0faf6 kj /z cgbltkq lbg pko0mgbljvPdf sfoff(o k¢lvn]; ft lbgleq lgj | snf0{cg; rl-^ adfindsf]9fFfdf hfgsf/L lbg'kg | .
- ^= <u>kj z cgtltkqsf]gjls/0f; DaGwl Joj:yf</u>M-!\_ lgod % sf]pklgod -#\_ adf¶hd kfKt u/sf] kj z cgtltkq gjls/0f u/fpg rfxg]JolQmjf; :yfn]kj z cgtltkqsf]Dofb; dfKt xg'eGbf ; ft lbg cufj}To:tf]cgtltkq hf/L u/sf]sfoffto k¢V; dlf cg; rL-& adf¶hdsf]9fFfdf lqj bq lbg' kq\$.
  - -@\_ pklgod -!\_ adf¶hd kfkt lgj pg pk/ sfoffno kplVn]cfj Zos hfFaem ubf{kj½ cgdltkqsf]gj ls/0f ug{dgfl; a bplVplf rf/; o ?kpf b:t/ ln0{a9ldf tlg dlxgf; Ddsf]nflu Io:tf]kpl2 cgdltkq gj ls/0f u/L lbg ; Sgp5 .
- \[
  \ki\frac{\pmathbf{k}}{2} \frac{\pmathbf{k}}{2} \frac{\pmath

u/l kfpg / gkfnleq kj½ u/fpg rfxdf To; /l Nof0lesf]j:t' gkfndf kj½ cgdltsfnflu cg',  $L^*$  adflhdsf]9fFfdf klfkgkq e/l sfofno; dlf k½ ug'{kg\$}.

- -@\_ pklgod -!\_ adf¶hd k½ ul/Psf]k¶fkgkqsf]; fy b¾fosf sfuhft ; nlg ug{kg M
  - -s\_lgod % adfind InPsf]k)f/L kj / cgdltkq,
  - -v\_lgod % sf]pklgod @\_adf[hdsf sfuhftx?,
  - -u\_ k}f/L ug{nfluPsf]pklgod -!\_ adflhdsf]j:tsf]lgsf;L ul/g]dhsaf6
    hf/L ePsf]la?jf:j:ytf k\psif0fkq.
- -\$\_ pklgod -#\_ adfind kikt gd\u00e9fsf]k\u00f4filzfnfdf k/Llf0f ubf\u00e4k\u00e3ffl ul/Psf]j:t':j:y ePsf]kf0Pdf sfof\u00e4non]To:tf]j:t'g\u00e4fnleq kj\u00e4 u/fpg cg\u00e4\u00e4l-( adfindsf]9f\u00e4fdf 5f\u00e4\u00e
- -%\_ pklgod -#\_ adf¶hd lnPsf]gd\u00e9f k\u00f4flyzfnfdf k/Llf0f ubf{\text{To:tf]}gd\u00e9fdf \u00e3j f/\u00e96f0g zqhlj \x\u00e4f]kf0\u00e4df k\u00e4fl\u00e4f k\u00e4fl\u00e4
- -^\_ lgod !# adfind pkrf/ u/fP kZrft\kjf/L ul/Psf]j:t':j:y ePsf] kf0ind sfoffnon]To:tfj:t'gjkfnleq kj ½ u/fpg pklgod -\$\_ adfind 5fjkhkhl{lbgj5}.
- -&\_ lgod !# adf¶hd pkrf/ u/fpFf klg k¶f/L ul/Psf j:t':j:y ePsf]gkf0Pdf sfoff(non]To:tf j:thf0{lgod !% adf¶hd gi6 ug{jf To:tf]j:t'; DalGwt b‡df lkmtf{ug{u/fpg'kg}}.
- - t/ To:tf]j:t'; qmldt /xsf]kf0Pdf lgod !% adfInd gi6 ul/gs .
- \*= <u>:j:ytf kdf0fkq lng]; DaGwL Joj:yfM</u>-!\_ Pgsf]bkmf !@ sf]pkbkmf -!\_ jf -@\_ adfInd :j:ytf kdf0fkq lng rfxg]JolQmjf; #yfn]b}fosf sfuhft; #Ug u/L lgsf; Lsf]nflu eP Ps; o ?k\pf / kgM lgsf; Lsf]nflu eP bO{ o ?k\pfFb:t/'; lxt cg'; \text{"L-!} adfIndsf]9fFfdf sfoffio kd\v ; dIf lgj \pq lbg'kq\p\ \H

- -s\_ lgsf; Lul/g]j:tsf]pTklQsf]k\psif0fkq,
- -v\_ jg k\()fjf/ eP jg ljefuaf6 hf/l ePsf]5f\(\bar{\barge}\) khl{
- -u\_ k'/ftflījs dxījsfj:t'eP k'/ftīj ljefusf]l; knfl/; kq,
- -3\_ lgsf; Lul/g]j:tsf]lan lahs -0Ejf0; \_,
- $-a_k \ kgMlgsf; l ul/g]eP kf/l ug[dhsn]hf/l u/f]kf/l cgdltkq,$
- -r\_ kgMlgsf; L ul/g]j :tsf]xsdf gkfndf kff/L ul/bf kt/2 ePsf]:j :ytf kdf0fkqsf]kl/tlnlk,
- -5\_ lgsf; L ug{JolQmsf} cflwsfl/s kl/rokq jf; :#yfn] lgsf; L ug{eP To:tf]; :#yf btf{kdf0fkqsf} kltlnlk / To:tf] sfdsf nflu s; inf0{ v6f0Psf]eP To; /L v6f0Psf]kq.
- -@\_ pklgod -!\_ adf¶hd lgj  $\$  kfkt ePkl5 kfkt sfuhft / lgsf; l ul/g]j:tsf] gd\[gfsf]cfj Zos hfFa\[em / k/Llf0f ubf{\lgj}\]snf0{:j:ytf k\[gmath]ffkq lbg pko\[em b]v\[gmath]f sfof\[gmath]footho k\[gmath]Vn]\[gsf; \lsf]nflu cg\[cmath]flu cg\[cmath]ffdf / kg\[gsf; \lsf]nflu cg\[cmath]flu cg\[cmath]
- -#\_ pklgod -@\_ adf¶hd cfj Zos hfFaem / k/Llf0f ubf{:j:ytf k¢lf0fkq lbg pkoQm gb]vdf sfoffio k¢lvn]lgj \bg k/\sf]; ft lbgleq ; f\sf] hfgsf/L cg'; \L-!# adf¶hdsf]9fFfdf ; DalGwt lgj \bsnf0{lbg'kg\subseteq} .
- (= sG; f0gdl6 nhfg]cgdlt; DaGwL Joj:yfM-!\_ la?jf, la?jfhGo pkh jf cGo j:tsf]kf/jxgdf /xsf]sG; f0gdl6 glkfnsf]af6f]eP/ cGo sg}dhsdf nhfg rfxg]JolQm jf; #yfn]Psxhf/?khf b:t/; #lg u/L cg; #L-!\$ adflhdsf]9fFfdf sfoffo; dIf lgjhg lbg'kgl5.
  - -@\_ pklgod -!\_ adf¶hd lgj þg lbbf b}fosf sfuhft ; mllg xg'kg₺ll-
    - $-s\_ s6; f0gd\cd{6} k\cd{6} k\cd{6} flug\cd{4} ug\cd{4} dhsn\cd{6} hf/\clup{$f$} u/\cd{6} fl\cd{6} k\cd{7} fl\cd{6} cgd\cd{6} tkq,$

    - -u\_ sG; f0gd[6sf]lanlahs,
    - $-3_$  9j fglsf]; fwg, t/lsf / k $\phi$ f $\psi$  ug{af6f}
    - $-a_s$  sG; f0gd[6df /xsf]j:tsf]pTklQsf]k\psif0fkq.
  - -#\_ sfoff(non]pklgod -!\_ adfi]nd kf/kt lgj f/g; fy ; mllg sfuhft / s6; f0gd()6 7ls b?:t eP gePsf]hfFaem ubf{Pd/sf]bkmf !# sf]pkbkmf -#\_ adfi]ndsf]cj:yf lj Bdfg ePdf

To:tf]s6; f0gd[6 g]kfnsf]af6f]eP/c6o dhsdf n]nfg cg; lt-!% adf]ndsf]9fFfdf cgdlt lbg[5].

- -\$\_ pklgod -#\_ adfind lb0Psf]cgdlt adfind sg}la?jf, la?jfhGo pkh jf cGo j:tsf]sG; f0gdl6 gkfnsf]af6f]eP/ cGo dhsdf nhfg]qmddf gkfnleq sg}sf/0faf6 66kh6 e0{To; df /x\strace{s}f]zqhLj aflx/ lg:sg jf k\ng ; Sg]; Defjgf ePdf To:tf]sG; f0gdl6 nhfg] JolQmn]t?Gt glhssf]sfoffno jf lhNnf slif ljsf; sfoffno jf slif ; Jf slb\nf ; \nf ug{ kg\strace{s}}.
- -%\_ pklgod -\$\_ adf¶hd sg}; \( \text{"rgf kfkt xg cfPdf sfoffno jf lhNnf sfif ljsf; sfoffno jf sfif; ]f sfbh]t?\( \text{to:tf]sG; f0gdfosf]lg/Llf0f u/L zqhLj kfng g; \( \text{Sg} \) Joj:yf u/L \( \text{To}; \sf)hfgsf/L oyfzL3 \) Ps \( \text{tx dflyNnf]lgsfo jf sfoffno / ; \( \text{H}7gnf0{\text{lbg'kg}} \) .
- -^\_ gkfnsf]af6f]eP/ nhfg nfluPsf]sG; f0gd]6 66kh6 e0{pklgod -%\_ adf]hdsf] cj:yf k/dlf To; df lgif]wt zqhLj aflx/ lg:sg gkfpg]u/L kbM Kofs]hË u/] dfq To:tf] sG; f0gd]6 nhfg lb0g5 . To; /L kbM Kofs]hË ubf{u/fpFf nflug]vr{; DalGwt JolQmjf; :hyfn] Aoxfg6kg]5 .
- !)= \frac{\textbf{lg/Llfssf}\textbf{lg/Llfssf}\textbf{kbdf}\textbf{tflsgsf}\textbf{nflu}\textbf{dflotf}\textbf{kfkt}\textbf{lz1f0f}\text{; #yfaf6 s[if lj 1fg lj ifodf sDtldf :gfts tx pQLOf{u/l g]kfn s[if ;]fsf] afnl ; Alf0f ; dkdf sfo{t clwstjf; fkl; ]f; dksf]kflj lws; xfos kbdf /xl Sjf/[]6f0{g}; DaGwl sfdsf] sDtldf kfF j if\text{sf}\cg\textbf{cg\textbf}\textbf{kfkt}\textbf{u/\textsf}\textbf{lghfdtl}\text{sd\textbf{f/l}}\textbf{xg}\textbf{kg}\textbf{s}}.
- - -#\_ pklgod -!\_ adf]nd lg/Llf0f ubf{lg/Llf0f ul/g]j:tdf pklgod -@\_ adf]ndsf s/fx? kinf gk/dlf jf sg}/flu nfu\sf]jf /flusf]nlf0fx? ePsf]gb[]vPdf To;/L Nof0Psf]sG;f0gd[\ddf /x\sf]j:t\sf]cfjZos gd\df ln0\{k/Llf0f\sf nflu k\phifluzfnfdf k7fpg'kg\dagger.
  - -\$\_ pklgod -#\_ adfind ln0Psf]gdgfsf]k\pfinzfnf k/Llf0faf6 :j:y /x\sf]k\pi bg kfkt ePdf To:tf s6; f0gd[6 lgsf; L jf k]f/Lsf nflu cgblt lbg k\rangle ug{kg\rangle}.
  - -%\_ pklgod -#\_ adf¶hd ln0Psf] gd\u00e9fsf] k\u00f4f\u00f4zfnfdf k/Llf0f ubf\u00e4 k/Llf0f ul/Psf] j:t\u00e4f]:j:ytfdf  $z^a$ \u00e4f nfu\u00e4f k\u00e9M\u00ek/Llf0fsf]nflu yk ; lj\u00e4f; Dk\u00e4g k\u00e4f\u00f4zfnfdf k7fpg' k\u00e4\u00e4 .

- o; /L kgM k/LIf0f ug{k7f0Psfdf; f\$f] k $\phi$ flJzfnf k $\|$ tj $\$ g kfKt geP; Dd sfoffon]To:tf] sG; f0gd $\$ 6 Sj f/ $\$ 6f0g:yndf g}/fVg nufpg' kg $\$ 5.
- -^\_ pklgod -#\_ jf -%\_ adf¶hd k/Llf0f ug{k7f0Psf]j:tsf]k\pfi\uzfnf k\pti\pgdf c:j:y /x\sf]s/f n\pl cfPdf ;f]Joxf\f ; u+7gdf hfgsf/L u/f0{; u+7gsf]lgb\zetag cg\; f/ lgod !# adf¶hd pkrf/ ug\f jf lgod !% adf¶hd gi6 ug\f jf To:tf]j:t'; DalGwt b\zetadf lkmtf{k7fpg cfb\zetag lbg' kg\sqrt{s}.
- !@= <u>k/LIfOf ug{t/lsf</u>M-!\_ lg/LIfsn]lgod !! sf]pklgod #\_ adf¶nd lnPsf]sG; f0gd¶6sf]gd\gf k/LIfOfsf nflu k\psif\zfnfdf kf\t ePkl5 b\strosf]sg}Ps jf PseGbf a9L k/LIfOf lj lw cj nDag u/L k/LIfOf ug{kg\structure}
  - -s\_ <u>; fdfGo k/llf0f</u>M zqhlj af6 ; qmldt eP gePsf]kQf nufpg cfFfn]x]l ; fdfGo k/llf0f ug...
  - -v\_ wfp/ k/LIf0fM9; L eP gePsf]kQf nufpg; knf kfgldf cfj Zos /; fog ld; f0{gdgf wfp/ k/LIf0f ug1.
  - -u\_ <u>5fg] k/LIf0f</u>M hSf -gdf6f}\_ eP gePsf]kQf nufpg ; knf kfgldf ; fjhl / 5flg]sfuh lknN6/ klk/ \_ sf]k\phiflj u/L k/LIf0f ug.[.
  - -3\_ ; Idbz\$ oGqaf6 k/LIf0fM zqhLj sf]klxrfgsf]nflu ; Idbz\$ oGqsf] k\psi u/L k/LIf0f uq{.
  - -a\_ **PS;/] k/LIf0fM** alp lahg -u**g**\_ x?df xg ; Sg] cfGtl/s ; **e**md0f kQf nufpg PS; /]d**]**zgsf]k\pf**i**]u u/L k/LIf0f ug**!**.
  - -r\_ <u>OGSoalg k/LIfOfM</u> 9; L jf zfsf0f' -AofS6I/of\_ eP gePsf] kQf nufpg To; sf nflu pkoQm dfNod ; lxt OGSoalg dlzgdf cfjZostf cq; f/sf]; do; Dd /fvL k/LIf0f uq.[.
  - -5\_ **/fk] ul/g]k/Lif0M** alp lahg / la?jfdf cfGtl/s ; qmd0f eP gePsf] kQf nufpg To:tf alp lahg / la?jf kf]6 0G6k Sjf/[G6f0g :yndf /fk] k/Llf0f ug.[.
  - -@\_ pklgod -!\_ df n[\/Pb[\/ afx\sf c\fo j:t\sf]\/k/Llf0f ug\{\kbf\k/Llf0f ul/g]j:t\sf] ; fdf\fo k/Llf0f u/L cfj\ Zostfd; f/\ To; sf]\lg; \text{qmd0f jf pkrf/ ug\{kg\}}.
- !#= pkrf/ ug[t/lsfM]lg/Llfsn]la?jf, la?jfhGo pkh, afofjhf]hsn sGoffh Ph[J6, nfebfos sL/f
  jf cGo j:tsf]pkrf/ ug[k/dlf b]tfosf]sg}Ps jf PseGbf a9L pkrf/ ljlw cjnDag u/L
  lg; qmdOf jf pkrf/ ug[u/fpg'kg]th

- -s\_ <u>wlds/0f pkrf/</u>M wlds/0f lj iffblaf6 xfj f gl5g{u/l sDtldf rf}l; 306f /fvl pkrf/ ug{.
- -v\_ <u>effts lj lwaf6 pkrf/</u>M zqhlj sf] lj zjftfsf] cfwf/df effts lj lwaf6 pkrf/ h:t}lr; f] tfk, lj ls/0f\_ ug].
- -u\_ <u>/; fog lj lwaf6 pkrf/</u>M lj leGg /; fogoQm lj iffblx?af6 -h:t}whf] u\( \bar{g} f, enfince cflb\_ pkrf/ ug\( \bar{l} . \)
- !\\$= vfgtnf; L lng]sfolj lwM-!\_ lg/Llfsn]P\dsf]bkmf !\% sf]pkbkmf -!\_ sf]v08 -u\_ adf]hd sg\
  k/Llf0f If\dp, e08f/0f :yn jf cGo s\dp}7fp\end{ff}f vfgtnf; L lng'k/\dpf vfgtnf; L ln0g]7fp\end{ff}f wgL
  jf ; DalGwt JolQmnf0{ vfgtnf; L lng nfu\structionsf] lj ifodf ; \text{hgf lb0{ sDtldf b0{ hgf :yfglo
  JolQmx?sf]/f\dt{j} /df vfgtnf; L lng'kg\dt{s}}.
  - -@\_ pklgod -!\_ adflhd vfgtnf; L lng]sfo@f lg/Llfsnf0{; xoflu ug'{; DalGwt ; j }sf] st{o xg\b . o; /L vfgtnf; L ln\bf s; \hat{n}]j fwf lj /f\b u/\df lg/Llfsn]lghnf0{; Denf0{a\entrol{e}nf0{pQm :yfgdf kj\z u/L vfgtnf; L lng' kg\b .
  - -#\_ pklgod -@\_ adfind ; DenfO{aenfO{ubf{klg afwf lj/fiv u/df To:tf]j fwf lj/fiv ug{} JolQmnfO{lg/Llfsn]To; k\$f/sf]sfo{af6 kg{; Sg]c;/;d}; pNn}v u/L afwf lj/fiv gug{\$f nflu cfb}z lbg; Sg\$.
  - -\$\_ pklgod -#\_ adf¶hd cfb½ lbbf klg afwf lj /fi\v hf/L /fvvdf To:tf]AolQmnf0{sfoffno kv0n]Pv0sf]bkmf @# sf]v08 -3\_ adf¶hd hl/j fgf ug{; Sgv5 .
  - -%\_ lg/Llfsn] o; lgod adf¶hd vfgtnf; L lnbf vfgtnf; L ln0Psf] 7fp@f la?jf, la?jfhGo pkh, afof¶h¶hsn sG6@h PhQ6, nfebfos sL/f jf cGo j:t'ePsf]kf0@df To:tf j:tsf]; DkUf{ljj/Of vhf0{dhNsf tof/ u/L;f]:yfgsf]wgL jf; DalGwt JolQm tyf pkl:yt cGo JolQmx?sf]; d‡; xL 5fk u/f0{Ps k||t;DalGwt JolQmnf0{lb0{Ps k||t cfkm, @ kmf0n; nllg u/L/fVg'kg...}
  - -^\_ lg/llfsn] pklgod -%\_ adf¶hd kiħnf k/\$f j:tx?sf] cfj Zos dfqfdf gd\[gf ln0{ l; na\[oldon\] u/l ; f]j:t\[sf]\[wgl jf ; Dal\[owt JolQm\] /f\[oldon\] /f\[oldon\]
  - -&\_ pklgod -^\_ adfind k/LIf0f ug{k7f0lpsf]j:tsf]k\pfilizfnf k/LIf0faf6 To:tf]j:t'c:j:y /x\sf]kf0lpdf;f]j:tsf]; DaGwdf Igod !! sf]pklgod -^\_ adfind pkrf/ ug[gi6 ug]jf To:tf]j:t'; DaGwt b\pdf |kmtf{k7fpg]cfb\pdf |bg' kg]\$.

- -\*\_ o; lgod adfind sg}7fp&f]vfgtnf; l lnbf sg}j:t'kinnf gk/dfjf c; DalGwtj:t'kinnf k/df; flxl Joxf/f dhNsfdfpNnV u/l kinf0n; mllq ug{kgl5.
- -(\_ lg/Llfsn] vfgtnf; L ubf{pklgod -^\_ adf¶nd sg}j:t' cf^gf] sAhfdf lng' kg{ ePdf sAhfdf lng nfluPsf]j:t', dfqf, ; \wf, cj:yf ; d\text{sf}Joxf]f pNn\text{y} u/L e/kf0{tof/ u/L Io:tf]j:tsf]wgL jf ; DalGwt JolQmnf0{Psk|t e/kf0{lb0{csf}{t}|t kmf0\text{n} ; mlg ug{kg}} .
- !%= **gi6 ug[k|qmof**M lg/Llfsn]sg}la?jf, la?jfhGo pkh, afofjhfJhsn sG6kh PhJ6, nfebfos sL/f jf cGo j:tsf]pkrf/ xg g; Sg]e0{jf cGo sg}sf/Ofn]PJg tyf o; lgodfjnL adfJhd To:tf]j:t'gi6 ug{kg[ePdf b]kfosf]k|qmof k/f u/L gi6 ug{kg}M
  - -s\_ gi6 ug{kg $\{j: thf0\{cGo: qmd0f: xg: gkfpg]u/l: alfn\}/fVg]}$
  - -v\_ v08 -s\_ adf[hd /flvPsf j:tsf]k\$[t / kl/df0f ; d]nf0{lj rf/ u/L uf8bj'kg] eP cfj Zos /; fogsf]k\pfi]ug[/ hnfpg'kg]eP pkoQm:yfgsf]Joj:yf ug[
  - -u\_  $v08 v_a dflhd ufl8g]j:t'jf hnf0lkl5sf]v/fglnf0{vf8hdf /fvl df6flh] k/l lbg].$
- !^= <u>lg/llfssf]sfd, st{o / clwsf/M</u> Pg tyf o; lgodfj nldf cGoq tf]sPsf sfd, st{o / clwsf/sf cltl/Qm lg/llfssf]cGo sfd, st{o / clwsf/ b}fo adf]nd xg\$M
  - -s\_ la?jf, la?jfhGo pkh, afofjhfjhsn sG6kh PhJ6, nfebfos sl/f tyf cGo j:tsf]cf]f/-k;f/ / k\pfi\pu ; DaGwdf tfljsPsf zt{tyf aGbl\psf]kfngf eP gePsf]cgUdg ug]/kfngf ePsf]gkfOkdf ; f\structure f\struct
  - -v\_ zqhlj dQm lfq, zqhlj dQm pTkfbg:yn tyf sd zqhlj ; qmldt lfq klxrfg uq{sfo{df ; u+7qnf0{; xofQu uq{.
- !&= **zt{tyf aGb]h cg?k gePdf ug¶**-!\_sg}JolOmjf; #yfn]k**]**f/L u/\$f la?jf, la?jfhGo pkh, afofjhf]hsn sG6Mp Ph¶6, nfebfos sL/f jf cGo j:t'k|rInt gkfn sfggn]tf\$\$f]zt{tyf aGb]h cg\$h gePdf To:tf j:t'sfoffon]pkrf/ u/L kj½ ug{lbg jf gi6 ug{jf; DaGwt dh\$df lkmtf{k7fpg]; DaGwdf lgb½gsf]nflu; f\$f]; \rangle f t?Gt; \mathbf{t} ygnfO{\log hg} kg\$.
  - -@\_ pklgod -!\_ adf¶hd ; Fgf kfkt ePdf ; u7gn]; f]; DaGwl hfgsf/l ; DalGwt dhssf]/fli6@ la?jf ; AlfOf ; u7gnfO{u/fO{To:tf]a:tsf]; DaGwdf ug{kg[sf/afxlsf]nflu; DalGwt sfoffonfO{cfjZos lgb≹g lbg'kg. .
  - -#\_ sfoffion]pklgod -@\_ adf¶hd ; u+7gaf6 kfKt lgb≹g adf¶hd sg}j:t'gi6 ug{jf; DalGwt dhsdf lkmtf{k7fpg'kg₺.
- !\*= <u>/sd hDdf ug{kg</u> sfoffnon]Pgsf]bkm @^ sf]k\pfhgsf]nflu /sd tf\pf k\f\[ ul/g]j:tsf] lan lahsdf pl\nlvt /sdsf]krf; k\ptzt /sd hDdf ug{cfb\racktrightz lbg; \sg\f\}.

- !(= cg; Gwfg tyf txlssft; DaGwl sfolj lwM -!\_ Pg cGtut s; // dflgg]sb}sfo{ePsf]eGg]; DaGwdf sfoffonfO{sb}JolOmn]jf dfNodaf6; rgf kfKt ePdf jf dfnj:tsf]lg/Llf0f jf k/Llf0fsf] qmddf Pg cGtut s; // dflgg]sb}sfo{ePsf]kfOPdf; f\$f]Joxf]f sfoffodf clenyst u/L s; //sf]kdf0f gi6 gxb]u/L lg/Llfsn]t?Gt cfjZos cg; Gwfg tyf txlssft z? ug{kg\$.
  - -@\_ lg/llfsn]s; %sf]cg; Gwfg tyf txlssft ubf{Io:tf]s; %;  $\[ \]$  ; DalGwt JolOm,  $\]$  cfj Zos sfuhft tyf ; f]  $\]$  ; DalGwt j:tsf]ljj/Of dfu ug{aofg u/fpg} k\psifOf ; sng ug{tyf kfkt sfuhft / j:tsf ; DaGwdf k/llfOf ug{kg}b}\psifOf Io:tf]j:thfO{oyfl:yltdf /fVg nuf0{; f]sf]cfj Zos dfqfdf gd\psif InO{k/llfOf ug{u/fpg'kg}} .
  - -#\_ pklgod -@\_ adfind k/LIf0fsf nflu k7f0f\sf\df k/LIf0f k\tipgaf6 To:tf]j:t':j:y ePsf]k\dfl0ft ePdf jf lgod !# adfind pkrf/ u/fp\df :j:y ePdf To:tf]j:tsf]aln lahs cg\;f/sf]/sd w/f\df ln0\tagle ln

  - -%\_ lg/Llfsn]o; lgod adflhd cfjZos k¢ff0f sfuhft ; sng ul/; skl5 cg; \[cap-l^\ adflhdsf]9f\[cap-f]\] for cleof\[\pi\_kq\] tof/ u/L; \[Dk\[0f\{sfuhft\]; \[lxtsf]\] ldl; \[n\] P\[\gammasf]\[bk\[mf\] \@&\ sf]\[pkbk\[mf\] +#\ adflhd; \[Dal\{wt\] lh\[lnfsf]\[lh\[nf\]; \[lsn\]; \[dlf\] k7\[\frac{lg}{lg}\].
  - -^\_ pklgod -%\_ adf¶hd ; /sf/L j lsnaf6 /fo kfkt ePkl5 ; f $\chi$ L adf¶hd lg/Llfsn]d2f x $\chi$ Clwsf/L ; d1f d2f bfo/ ug $\chi$ 5 .
- @)=  $\frac{d2f \ x \sqrt[3]{clwsf/L}}{clwsf/L}$  Py cGtu{sf]s; \( ', \) DaGwL d2fsf]sf/j fxL / lsgf/f; DalGwt If\( \frac{1}{3}\)sf]j |/i7 Knf06 Sj f/\( \frac{1}{3}\)6f0g clws\( \frac{1}{3}\)n [ug\( \frac{1}{3}\)
- @!= **lgblzsf agf0{nfu"ug{; Sgl]**-!\_ dlqfnon]la?jf :j:ytf ; DalwL lj ifodf cfj Zos lgblzsf agf0{ nfu"ug{; Sg]5 .
  - -@\_ pklgod -!\_ adf]hd hf/L ePsf]lgb[zsfsf]kfngf ug'{; DalGwt ; a}sf]st{o xg} .
- ee cg; Fldf yk36 jf x/k/ ug{; Sg/ dlqfnon] gkfn /fhkqdf ; Fgf k\$fzg u/l cg; Fldf cfj Zos yk36 jf x/k/ uq{; Sq. .
- @#= **vf/hl / arfp**M-!\_ la?jf ; Alf0f lgodfj nl, @)#! vf/h ul/Psf]5 .

-@\_ pklgod -!\_ adflhdsf] lgodfj nl adflhd eP u/\$f sfd sf/afxl o; } lgodfj nl adflhd eP u/\$f]dflgg]5 .

#### cg; ۲L-!

#### -lgod % sf]pklgod -!\_ ; & ; DalGwt\_

#### kj≱ cgdltkqsf]nflu lb0@]lgj \$gsf]9fFf

btf{gDa/ M

>L sfoffo k¢lVHo,"

\_ = = = .

#### ljifoMkj≱ cgdltkq kfpnF.

- != k}f/L ul/g]j:tsf]ljj/0fM
  - -s\_ jlp, khgg la?jfx?
  - -v\_ pkefloj:t'
  - -u\_ k\phi[\u2014zfnfsf:k]; d\partit{j}, j fofinf]nsn s66fth Ph(6, nfebfos sl/f
  - $-3_{-}$  cGo -=== == pNny ugI
- @= k}f/lstf\sfjgfd / 7\u00e4fgf M
- #= btf{g=+; :+yf M
- = Kofg g=M
- $\mbox{\ensuremath{\mbox{\ensuremath{\mbox{\sc kl/ro}}}} g_{+}/fxbfgl]jf gful/stfsf]k\psif0fkqsf]g_{+} M$
- ^= lgsf; lstf\[ f]gfd / 7\[ fgf M
- &= j:tsf]j}flgs gfd M
- \*= j:t\$f]; fwf/0f gfd M
- (= hft M

 $kl/df0f \div dfqf - sh tfin_Mdiss 6g = = sinl = = ufd = = 0sf0{= = }$ !)=  $kl/df0f \div dfqf - z4 tfin_Mdhs 6g == shl == ufd == 0sf0{==}$ !!= pTklQsf]dhs M <u>@</u>\_ **!**#= j:t'rnfgL u/\$f]dhs -slG6«ckml; kdQ6\_ M j:t'rnfqLu/\$f]ljb½LjGb/ufx M **!**\$= !‰= kj≱gfsf M kf\sfx?sf]; \(\text{Wof} / \lij \)/0f \(\text{M}\) **!**^= klxrfg IrGx M !&= ; fwgsf]lsl; d M kfglhxfh xj f0hxfh ; 8s; j f/l /jh !\*= ; fwgsf]gfd M ! **(**= cfudg ldlt M **@**)= clGtd uGtJo:yn M @**!**= k)f/L ug{kg{sf/0fM @@\_

#### 3f**f**0ff

dfly plNnlvt ljj/0fx? dp}xfdln] hfg] aen Dd 7ls ; fFf] / k0f{5g\sfoffnon]dfu u/\$f] kj½ cgdltkq hf/L ug\$f nflu cfjZos kg[sg}klg ;Da4 hfgsf/L tyf ; Dal6wt sfuhftx? pknAw u/fpg]5 $\div$ 5f}/ kj½ cgdltkqdf plNnlvt lgb½gx?sf]kfngf ug{d6h/ ub\$ $\div$ ub\$f}.

		<u>lgj (ssf,-</u>
ldltM	-k]f/Lstf{;	b:t∨t M
:yfgM		gfd M
		kb M

cg; FL-@
-lgod % sf]pklgod -#\_ ; & ; DalGwt\_
la?jf jf la?jfhGo pkhsf]kj \( \) cgbltkqsf]9fFf

gkfn;/sf/

slif tyf; xsf/L dGqfno

s**[**if Ij efu

afnL; AlfOf lgb≱gfno

/fli6@ KnfG6 Sjf/J6f0g sfofind

====sfoff0

#### la?jf jf la?jfh@ pkhsf]kj 2 cgdltkq

kj≱ cgdltkq ; Wof M

 $b \fosf k \fosf \fosf$ 

k/ff/lstf\stf\stf\stf\stf\stf\stf\stf\stf\stf\	lgoftstfsfjgfd/7llffgf		
15/4 1/ 31 01/ 1/ 1101/4			
k}t/L ul/g]la?jt jt lj?jth60	k}f/L ul/g]la?jf jf lj?jfh@ pkhsf]ljj/0fM=		
pTklQsf]dhs	p2 <b>]</b> o÷clGtd pkofJu	kf/jxg dhs -x?_	

kj≱ gfsf÷la6b'			clitd uit		
j ) flgs gfd	; fwf/0f gfd	hft	kl/0	dfOf -tfjn÷; ₩of_	

k)f/lsf zt{tyf cj:yfx? M

- -!\_ la?jf jf lj?jfhGo pkhsf]sG; f0gd $\S$ 6 df6f] enf/kftsf jLp tyf cGo ; qmd0faf6 dQm xg' kg $\S$ 5 .
  - -@\_ To:tf]sG; f0gd[6sf]; fydf cflwsfl/s la?jf :j:ytf k $\phi$ f0fkq xg'kg $\phi$  .

kj≱sf ljzji zt{cj:yfx?÷cltl/Qm3fji0ffM-----

kfil6 066ksjf/[l6f0gsf cfjZostfx?

 $\texttt{cj} \, \texttt{lwM} = \hspace{-1mm} \texttt{b} \, \texttt{lv} = \hspace{-1mm} \texttt{;} \, \texttt{Dd}$ 

ht/L u/\$t]ldlt N		cgdltkq hf/l ug[clwsf/lsf]-
jxfn /xg]cjlw∥		b:t∨tM
hf/L u/\$f]:yfg M	cgdltkq Hff/L ug] sfofnosf] 5fk	gfd y/M
	e.e.(ee., e	kbM
		ldltM

cg; rl#

-lgod % sf]pklgod -#\_ ; & ; DalGwt\_
afoffnffnsn sG6fn Phg6, nfebfos sl/fsf]kj ½ cgdltkqsf]9fFf

gkfn;/sf/

slif tyf; xsf/L dGqfno

s**[**if Ij efu

afnl; Alf0f lgb≵gfno

/fli6@ KnfG6 Sjf/16f0g sfofind

sfoff0

afofinfinsn scofin Philo, nfebfos sl/fsf]kj z cgdltkg

kj≱ cgdltkq ; Wof M

 $b \fosf k \fosf \fose s l/f b \fose s l/f$ 

k <b>]</b> f/Lstf <b>&amp;</b> f]gfd / 7 <b>u</b> fgf	lgof{stf\$f]gfd / 7¶fgf		
15/11 1/ 3 / /3 @ 0//			
kJt/l ul/gjatotihtijnsn svoki 	s66kgn Phg6, nfebfos sl/fsf]ljj/0fM==========		
pTklQsf]dhs	k}f/L ug{kg{sf/0f	kf/jxg dhs -x?_	

kj≱ gfsf÷laGb'	clitd uitJo:yn
j ) flgs gfd ; fwf/0f gfd	jlu\$/0f ljsf;sf]cj:yf
:k[]; dg+olg6sf]; Wof	KoflsË tl/sf Kofs <b> </b> hsf]klxrfg lrGx

## k]f/lsf zt{tyf cj:yfx? M

- $-!_{\_}$  zqhljsf]; qmd0faf6 dQm xg'kg $\$ .
- -@\_ sG; f0gd[6sf]; fydf cflwsfl/s :j:ytf k $\phi$ f0fkq x $\phi$ 'kg $\phi$ .
- -#\_ cfj Zos k/d/f pTklt dh\ssf clwsf/ kf\kt clwsf/laf6 k\f\f\f ul/g]j:t\sf]j\nextrm{z}hsf] lgoldt c\titfndf lg/Llf0f tyf k/Llf0f ul/Psf]k\d\f0fkq k\nextrm{z} ug\fkg\f\f\f\f.

hf/L u/\$f]ldlt N		cgd tkq hf/L ug]clwsf/Lsf]-
jxfn/xg]cjlw M	1007 / 7	b:t∨tM
hf/L u/\sf]:yfg \mathbb{M}	cgbltkq Hff/L ug[ sfofhosf] 5fk	gfd y/M
	5.6.(655.] 5	kbM
		ldltM

cg; rl-\$

-lgod % sf]pklgod -#\_ ; & ; DalGwt\_
df6f] %ofp, kl6 jf cGo la?jf xsg]dfNodsf]kj \( \) cgbltkqsf]9fFf

gkfn;/sf/

slif tyf; xsf/L dGqfno

s**l**if lj efu

afnL; AlfOf lgb≵gfno

/fli6@ KnfG6 Sjf/Q6f0g sfoqind

===sfoff0

#### df6f] %ofp, kl6 jf c6o la?jf x56j]dfWbdsf]kj2 cgdltkq

kj≱ cgdltkq; Wof M

b\fosf k\fosf k\fosf]flstf\hfosf] df\fosf] df\fosf] \text{wofp, kl6 jf cGo la?jf xs\fostg] df\fosf] zt{/ cj:yfdf g\fostgfnleq k\footnote{f}\hfostgnflu la?jf; \text{AfOf P\footnote{g}, @)^\$ sf]b\footnote{f} t tyf la?jf; \text{AfOf lgodfj nl, @)^^ sf]lgod \text{% sf]pklgod \$-\psi\_a adf\hosf] t cgdlt kq k\footnote{f} ul/Psf]5.

k}f/Lstf\$f]gfd / 7\u00e4fgf	lgof{stf\$f]gfd / 7\u00e4fgf		
k]f/L ul/g]la?jf jf lj?jfh6o pkhsf]ljj/0fM====================================			
pīklQsf]dh\$	p2]/o ÷ clGtd pkofly	kf/j xg dhs -x?_	

kj≱gfsf÷laGb'		clitd u	GtJo :yn			
	11/1606	16.6	v 6 7 0 v 6	v.		
j:tsf]ljj/Of	kl/df0t -tftþ	÷dtqt_ l	Kofs[hsf]; Wof	Kot	isE tI/sf	

#### k}f/lsf zt{tyf cj:yfx? M

- -!\_ k]f/L ul/g] df6f] %ofp, kl6 jf cGo la?jf xs6j] dfNbd enf/kftsf lap, lj?jfsf cjz]fx? / ; endOfaf6 dQm xg' kg15 .
- -@\_ sG; f0gd[6sf]; fydf cflwsfl/s la?jf :j:ytf k $\phi$ f0fkq x $\phi$ 'kg $\phi$ .
- -#\_ sG; f0gd[6 aflx/k] ng g; Sg]u/L; //IIft 7fpeff /fVg'kg[5].
- -\$\_ c\loog cg\; \text{Gwfgsf] nflu eP cg\; \text{Gwfg kZrft } \text{Sjf/\left[6f0g dws\text{t} jf \text{ lg/Llfssf]cfb\text{\geq}} cg\text{?k x6fpg'kg\text{\geq}} .
- -%\_ kf/L ul/g]df6f];  $V \lor f$  tyf hlj f0faf6 dQm xg' kg.

#### k}f/lsf ljzj zt{cj:yfx?÷cltl/Qm3fj0ffM-----

hf/L u/\$f]ldlt M		cgdltkq hf/L ug{clwsf/Lsf}-
jxfn /xg]cjlw N		b:t∨tM
hf/L u/\$f]:yfg N	cgdltkq Hff/L ug[ sfofhosf] 5fk	gfd y/M
	o.o.(.oo.]	kbM
		ldltM

cg; rl-%

-lgod % sf]pklgod -#\_ ; & ; DalGwt\_

 $\label{eq:hdlijt} $$ hdlijt kl/dflht j:t+cgjflzs kl/dflht j:t+66; hligs kbfy&f]kjt cgdltkqsf]9fFf $$ hdlijt kl/dflht j:t+cgjflzs kl/d$ 

gkfn;/sf/

slif tyf ; xsf/l dGqfno

s**[**if lj efu

afnl; AlfOf lgb≱gfno

# /fli6@ KnfG6 Sjf/Q6f0g sfoqind

# hdknflld÷hlljt kl/dflh{ j:t+cgjflzs kl/dflh{ j:t+ 6k; hlgs kbfy\f]kj} cgdltkq

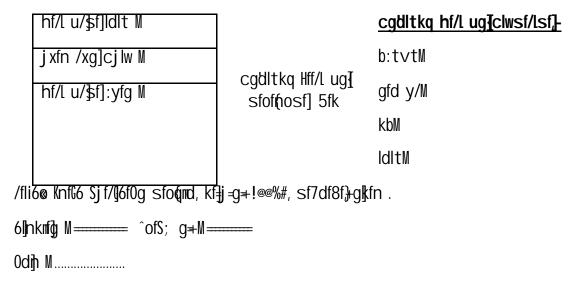
kj≱ cgdlt kq; \of M

 $b \fosf \colon b \fosf \colon \col$ 

k}f/Lstf\f]gfd / 7\fgf	lgof{stf\$f]gfd / 7¥fgf		
plklQsf]dh\$	p2 <b>]</b> o ÷ clitd pkotlu	kt/j xg dhs -x?_	

k]‡ gfsf÷laGb'	clitd uitJo:	yn		
; fwf/0f÷jg:klt gfd kl/df0	of -tfm÷; ₩of_	Koflsë tl/sf-	÷Kofs¶hsf]klxrfg lrGx	
kf]6 066kSjf/[]6f0g :ynsf]7]	ufgf <del>l </del>		<del></del>	
cWoogstf&f]gfd / 7lufgf ==				
cjlw -lbg÷dlxgf_ M=====	b <b>[</b> ]v :		<del></del>	
k <b>]</b> f/lsf zt{tyf cj:yfx? M				

- -!\_ sG; f0Gd $\fingled{0}$ 6 df6f $\fingled{0}$ enf/kftsf lap / la?jfsf $\fingled{0}$ 6 d $\fingled{0}$ m xg'kg $\fingled{0}$ 5 .
- -@\_ sG; f0gd[6sf]; fydf cflwsfl/s la?jf :j:ytf k $\phi$ f0fkq x $\phi$ 'kg $\phi$ .
- -#\_ k)f/lstffi]dfCotf kfkt kf]6 0C6kSj f/[]6f0g ; lj wf ePsf]7fpEf /fl]g' kg]5 .



cg; lt-^

-lgod % sf]pklgod -^\_ ; & ; DalGwt\_

kj‡ cgdltkq lbg pkoQm gb[vPdf lb0@]hfgsf/lsf]9fFf

gkfn;/sf/

slif tyf; xsf/L dGqfno

s**l**if lj efu

afnL; AlfOf lgb≵gfno

/fli6@ KnfG6 Sjf/J6f0g sfoqind

sfoff0

>| ========

#### ljifoMkjż cgdltkq lbg pkoQmgbNvPsfJoxf/f hfgsf/L u/f0Psf].

 $tkf0h]b\fosf]a:t'k\fflug\fkj\fgrame cgdltkq kfpgsf]nfluo; sfofhodf ldlt =====df lbg' ePsf]lgj\fgrame pk/sf/afxl x\ff b\fosf]cfwf//sf/0faf6 \text{ fo:tf]j:t'k}f/lug\frame lbg' ePsf]lgy\frame pk/sf]Joxf\frame la?jf; \text{Alf0f Pb}, @)^$ sf]bkmf * sf]pkbkmf *#_ tyf la?jf; \text{Alf0f lgodfj nl, } @)^^ sf]lgod % sf]pklgod -^_ adf\frame hfgsf/lsf]nflucg/f\frame ul/\Gamma5.$ 

!= k| 2 cgdltkq kfpqsf]nflu lbPsf]lgj bg ; \(\text{Wof / IdltM}\)

@= k]f/L ug{rfx\$f]a:t\$f]laa/0fM

-s\_j:tsf]gfdM

-v\_ kl/df0f -tfjn÷; \\of\_M

- -u\_ kf\sfx?sf]; \wofM
- -3\_ klxrfg IrCxM
- -a\_ lgsf; L ug{dhssf}gfdM
- -r\_ lahs ; \text{\tin}}}}}}} \end{\text{\tett{\text{\te}\tint{\texi}}\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\texi}\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\te
- #= kj /z gfsfdf NofOPsf j:tsfjnflu kj /z cgdlt dfu u/sf]ePdf,-
  - -s\_ To:tf]j:t'lg/Llf0f u/\sf]ldltM
  - -v\_ lg/Llf0f u/\\$f]:yfgM
  - -u\_ sG; f0gd[6sf]Ij j /0fM
- \$= kj \( \frac{1}{2} \) cgdltkq lbg pkoQm gb[\( \text{PSf} \) cfwf/ / sf/\( \text{0fx?M} \)
- -s\_ lgifl[wt s6; f0\gd[6 ePsf] -s] s:tf] s6; f0\gd[6 xf] / sg sfg\gatgaf6 lgifl[wt xf] k i/6 vhfpg]
  - -v\_ k]f/L zt{tyf a6blh cg?k gePsf]-s]s:tf]zt{tyf a6blh cg?k ePg kil6 vhfpg]
  - -u\_ pkrf/ pknAw gePsf]-s]s:tf]pkrf/ ug{kg[lyof]/ To:tf pkrf/ gkfnleq pknAw eP gePsf]/ ePdf cfly{\$ ?kn]; ej eP gePsf]k/16 vhfpg]
  - -3\_ sfuhftx? ckofl(t jf cflwsf/ls gePsf]-sg sg sfuhft gku\sf]vhfpg]
  - -ª\_ cGo sg}sf/Of ePdf ∨hfpg**∏**

	lg0f() ug{clwsf/lsf}-
ldltM	b:t∨tM
sfof(nosf]5fkM	gfd y/M
	kbM

#### cg; rl-&

# -lgod ^ sf]pklgod -!\_ ; & ; DalGwt\_

#### kj‡ cgdltkq gjls/0fsf]nflu lbg]lgj \$gsf]9fFf

lgj∮g; ₩of M

-sfofho kofhgsf]nflu dfq\_

>L sfoffio k\$\psi\$VHo;" ==========

#### lj ifoMkjz cgdltkq gjls/0f u/l kfpnF

- !=  $hf/l ePsf]k] \gtrsim cgdltkqsf]; Wof g=$
- @= hf/L ul/Psf]ldlt / :yfgM
- #= kj\kq gjls/0f ug{k/\sf]sf/0fM
  - cfoft ug{; do nflg]
  - hf/L ul/Psf]; doleq kj ½ gfsfdf a:t'gcf0{ku\$fih]
  - cGo -vhfpg]

3f**#**0ff

dfly plNnlvt ljj/0fx? dħ}xfdln]hfg]aeħ Dd 7ls ; fFf]/ k0f{5g\. kj½ cgdltkq gjls/0fsf nflu sfofħon]dfu u/\$f]cfjZos kg{hfgsf/l tyf ; DalGwt sfuhftx? pknAw u/fpg]5\+5f}+

		lgj (ssf)-
IdItM	-k]f/lstf{; :#yf ePdf ; :#yfsf]5fk_	b:tvt M
:yfgM		gfd M
		kb M
		kb M

#### cg; ۲L-\*

#### -lgod & sf]pklgod -!\_ ; & ; DalGwt\_

#### kj‡ gfsfdf kj‡ cgdlt Ingsf nflu lb0g]lgj \$gsf]9fFf

lgj∮g; ₩ofM

-sfoffo k\psi f]nflu dfq\_

#### ljifoMk}f/L ug{kj≱ cgdlt kfpFn.

>[	sf	of(	10	kϸʻ	VHO	),"		
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b) fo j df] hd ljj/0f ePsf] la?j f, la?j fhGo pkh, afofjhlhsn sG6fh Ph]6, nfebfos sl/f j f la?j f xs $\{g\}$  df| lod ePsf] sG; f0gd]6 g| fnleq k) f/L ug $\{g\}$  nflu ====gfsfdf cf0[ u $\{g\}$  f]; f] sf] lg/Llf0f u/L la?j f; #Hf0f P $\{g\}$ , @)^\$ sf] bk $\{g\}$  tyf la?j f; #Hf0f lgodfj nL, @)^^ sf] lgod & adf] hd k] \( \frac{1}{2} \) cgd| tkq kfp| felg of] lgj \( \frac{1}{2} \) by k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] (g) hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] hg k\( \frac{1}{2} \) f] hg k\( \frac{1}{2} \) u/\( \frac{1}{2} \) f] hg k\( \frac{1}{2} \) hg k\( \

j=	kÿf/lstf\$f]gfd / 7µfgf
<u>@</u> _	lgsf; Lstf&f]gfd / 7lJıfgf
#	k)f/Lsf]nflu kj‡ gfsfdf NofO((sf]j:tsf]ljj/OfN+
	-s_ alp, khgg la?j fx?
	-v_ pkefljoj:t'
	-u_ kþfluzfnfsf :kl]; dðg, afoflþf\$n sG6kðþ PhO6, nfebfos sL/f,
	-a_ cg'; Gwfg, cWbogsf]nflu
	-r_ cGo-= = = pNn}/ ug.[
	j:tsf]j}flgs gfdN
	j:tst]; fwf/Of gfdN

	hftl	
	N/df0f÷dfqf -sh tfjh_M d±6=	s‡hl= ufd 0sf0
\$=	pīklQsf]dh\$	
<b>%</b> =	rnfgl u/\$f]dh's	
^=	kj≱cgdltkq;Wofg≠	
<b>&amp;</b> =	la?jf:j:ytfk¢lf0fkq;₩ofg≠	
*=	rnfglsf]ljb≱l aGb/ufx	
(=	gktndt kj‡ u/\$t]gtst	
!)=	Ktt\$tx?st]; Wot / ljj/Ot	
ij=	klxrfg IrGx	
<u> @</u> =	9j fglsf]; fwgsf]lsl; d	Kfglhxfh÷xjf0fhxfh÷;8s;jf/l÷/jh÷ofqjfxs
!#=	; fwgsf]gfd	
!\$=	cfudg ldlt	
!%=	clGtd uGtJo :yfg	

dfly pNnlvt ljj/0fx? djn}xfdln]hfg]aeljt Dd 7ls ; fFf]/ k0f{5g\k] ½ cgdltsf nflu sfoffton] dfu u/\$f]cfj Zos kg{hfgsf/L tyf ; DalGwt sfuhftx? pknAw u/fpg]5÷5f}.

<u>lgj</u>∮ssf,}-

IdItM b:tvt

:yfgMM gfd y/ M

-k]f/lstf{; :\nyf ePdf ; :\nyfsf]5fk\_ kbM

cg; Fl-(
-lgod & sf]pklgod -\$\_ ; \( \mu \) ; \( \mu \) is aliwt\_

gkfn;/sf/

slif tyf; xsf/L dlqfno

s**[**if lj efu

afnL; AlfOf lgb≱gfno

/fli6@ KnfG6 Sjf/Q6f0g sfoqind

====sfoffio

#### 5f**8**kHl{

5fkhl{cfb}z; \text{\text{wof }}g \text{\text{#}}M

>**l** -k**]**f/lstf\$f]gfd / 7**]**ufgf\_

 $\label{thm:continuity} tkf0fn]o; gfsfaf6 k]f/L ug{nfu}f]b]fosf]j:t'lj?jf; Alf0f P]j, @)^$ tyf lj?jf; Alf0f lgodfj nl, @)^^ sf]k|tsh /x}f]gkf0f\sf]lj?jf; Alf0f lgodfj nl, @)^^ sf]lgod & sf]pklgod -$_ adf]nd g]fnleq Nofpg of]5f]khL{lb0f\sf]5 .$ 

5f <b>8</b> khl{lb0 <b>f</b> sf] <b>j</b> :t\$f]			
lgsf;lstf\$f]gfd / 7\u00c4fgfM			
; fwf/0f gfd	j¶flgs gfd	kl/df0f	

pTklQsf]dh\$				k <b>j</b> ≱ cg	dits	sf]lgj	i∳g;₩	of / Idit
lg/Lif0f u/\$f]ldlt				kj≱ gfsf				
kj≱ cgbltkq; Wot	kj≱cgdl cjlw	tkqs	t]axtnl	Ta?j†:j k¢f0fkq	_		ctudg	j ldlt
p2 <b>I</b> o÷pkoflµ	klxrfg IrGx			9jfglsf]; fwgsf]gfd, gDa/, lsl; d / ; Wof			a/, lsl; d / ; ₩of	
5f8khl&f]Ijz]fzt{I6	(k0flx?							
-S_								
-V_								
-u_								
-3_								
ldit N						5f <b>\$</b> k	(hl§f]c	fb≱ lbg]clwsf/lsf,-
hf/L u/\$f]:yfg M						b:t\	/tM	
			sfoffos	sf]5fk		gfd,	y/M	
						kbM		

#### cg; rl-!)

-lgod \* sf]pklgod -!\_ ; & ; DalGwt\_

la?jf:j:ytfk\pdf0fkqsfnflulbg]lgj\pgsf]9f\rightff

lgj Ŋg; ₩of M

-sfoffo koffngsf]nflu dfq\_

>l sfoffio k#VHo,"

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#### lj ifoM**la?jf :j:ytf kdf0fkq kfpl**n.

d÷xdln]b}fo jdflhdsf] la?jf, la?jfhGo pkh, afoflhflhsn sG6fh Ph()6, nfebfos sl/f lgsf; l÷kbMlgsf; l ug{rfx}flh]lj?jf:j:ytf kb0fkq kfpFelg la?jf; Af0f Pb, @)^\$ sf]bkmf!@ sf] pkbkmf-#\_ tyf la?jf; Af0f lgodfj nl, @)^^ sf]lgod \* adflhd of]lgj bg k# u/#f]5+5f}+

- != lgsf; lstf\[ f]gfd / 7\[ fgf M
- @= btf{; \wof M
- #= Kofg g#M
- $= kl/ro \ v = kl$
- %= la?jfjflj?jfhGopTkfbgnlhfg]JolQmsf]gfd/7lJfgfM
- ^= j:tsf]j}flgs gfd M
- &= j:tsf]; fwf/0f gfd M
- \*= j:tsf]ljj/Of M
- (= kl/df0f÷dfqf-sh tfm]\_M do sml und 0sf0{
- !!= k}f/L ug{dh\$ M
- !œ 3f¶ift kj⊉gfsf÷laGb'M

- !#= kf\sfx?sf]; \(\text{Wof} / \lij \) / Of \(\text{M}\)
- **!**\$= klxrfq IrGx M
- !‰ p21/o÷clGtd pkofu M

khgg, sf7, cfBflus pkh, pkeflu, 8glh -sf7sf KofsIhË ; fdull koffuzfnfsf gdgf, df0gmf] cuffqHd, df0gmfhflhsn, afoffhflhsn s66th Ph(6, nfebfos sl/f jf c6o eP vhfpg)

- **!**^= ; fwqsf]lsl; d M
- kfgl hxfh
- $xjf0{hxfh}$  ; 8s; jf/L

/ħ

- ofq' fxs
- ; fwgsf]gfd M !&=
- !\*= klyfg IdIt M
- OIR5t lg/LIf0fsf]ldlt / :yfg M !(=
- **@**)= cltl/Qm-k}f/L ug{dhssf]cfj Zostfg; f/\_ 3fif0ff M
- lgjøg lbg'eGbf cl3 ul/Psf]pkrf/sf]ljj/Of M @**!**=

#### 3f**f**0ff

- dfly plNnlvt ljj/0fx? djn}xfdln]hfg]a'eij, Dd 7ls ; fFf]/ k0f{5g\ ļ=
- la?jf:j:ytf kdf0fkq hf/L ug&f nflu cfjZos sG;f0gd06sf]lg/Llf0f÷^oldu2g÷pkrf/sf;DaGwdf <u>@</u>= /fli6@ Knf66 Sjf/J6f0g sfo@mdsf Knf06 Sjf/J6lg clwstx?af6 lbOPsf lgbtgx? djn}xfdln]kfngf ug5÷5f}⊦
- la?jf:y:ytf kdf0fkg hf/L ug\$f nflu cfjZos sG;f0gdQ6sf]lgsf;L; E ; DalGwt ;j}; Da4 hfgsf/L #= tyf sfuhftx? djn}xfdln]pknAw u/fpg]5'÷5f}+

		<u>lqi bssf,-</u>
IditM	-lgsf; lstf{+ k  tlglwsf]cflwsfl/s 5fk_	b:t∨t M
:yfgM		gfd M
		kb M

cg; lt-!!

-lgod \* sf]pklgod @\_ ; u ; DalGwt\_

la?jf:j:ytfk\psi\floor\f

gkfn;/sf/

slif tyf; xsf/L dlqfno

s**l**if lj efu

afnL; Ælf0f lgb≵gfno

/fli6@ KnfG6 Sjf/Y6f0g sfoqind

====sfoffio

la?jf :j:ytf kdf0fkq

k¢lf0fkq; Wof M

glkfnsf]la?jf;Alf0f;u7gaf6	===sf]la?jf;

# ! sG; fOgd[6sf]ljj/Of M

lgsf; Lstf\sf]gfd / 7\unifgf M

la?jfjflj?jfhGopTkfbgnhfg]JolQm-sG;f0gL\_sf]gfd/7lJfgfM

 $\label{lij} $$kfsx?sf];$$ \begin{tabular}{l} $\sl = 1, \label{lij} $\sl = 1, \label{lij} $$\sl = 1, \label{lij}$ 

p2/o÷clGtd pkof/ M

klxrfg IrGx M

pTklQsf]:yfg Mgkfn /fHo

; fwgsf]lsl; dM

3flift kj‡ gfsf÷laGb'N
pTkfbgsf]gfd / 3flift kl/df0f M
lj?jfsf]j}flgs gfd M

dfly plNnlvt la?jf / lj?jfhGo pTkfbg jf cGo lgolGqt j:tk? pkoQm cflwsfl/s klqmofx? cg'; f/ lg/LlfOf, hfF, k/LlfOf ul/bf kff/L ugfdhsnfpNnfv u/ff Sjf/O6Lg zqhLjx?jf6 dSt 5g / kff/L ugfdhssffla?jf :j:ytf cfjZostfx? nufot lgolGqt gg-Sjf/O6Lg zqhLjx? cgsh ePsffJoxfff kfffOft ul/G5 .

#### @= cltl/Qm3fff0ff M

#### #= lg; qnd0f÷lg; qnd0f pkrf/

pkrf/ u/\rightarrow{\frac{1}{3}} \lightarrow{\frac{1}{3}} \lightarrow{\

/; folgs -; lqmo tTj x?\_ M cj lw / tfkqmd M

sG; G6kg M cltl/Qm hfgsf/L M

lg/Llf0f u/\ft]ldlt M

hf/L u/\flackf]ldlt M

 $ldlt = = = = b / \ \% \ leq \ lgsf; \ lul/; \ sg'kg$ .

hf/L u/\$f]:yn M cflwsfl/s 5fk **kdf0fkq hf/L ug]clwsf/Lsf]**-

b:tvtM

gfdM

kbM

cg; FL-!@
-lgod \* sf]pklgod @\_ ; E ; DalGwt\_

gkfn;/sf/

slif tyf; xsf/L dGqfno

s**[**if Ij efu

afnL; AlfOf lgb≱gfno

/fli6@ KnfG6 Sj f/Y6f0g sfoqnd

====sfoff0

la?jf kgMlgsf; L : j : ytf kdf0fkq

kdf0fkq ; Vof M

glkfnsf]la?jf;Alf0f;u7gaf6	===sf]la?jf;Alf0f;#yfnf0

#### ! sG; fOgd[6sf]Ijj/0f M

lgsf; lstf\[ f]gfd / 7\[ fgf M

la?jfjflj?jfhGopTkfbgnhfg]JolQm-sG; f $QgL_sf$ ]gfd / 7hfgf M

 $\label{lij} $$kfsx?sf];$$ \begin{tabular}{l} $\sl = 1, \label{lijj} $$\sl =$ 

p21/o÷clGtd pkofly M

klxrfg IrGx M

pTklQsf]:yfg Mgkfn /fHo

; fwgsf]lsl; dM

3f**j**ift k**j≱** gfsf÷laGb'M

pTkfbgsf]gfd / 3f¶ift kl/df0f M

lj?jfsf]j}flgs gfd M

dfly plNnlvt la?jf / lj?jfhGo pTkfbg jf cGo lgolGqt j:tk? pkoQm cflwsfl/s klqmof cg'; f/ lg/LlfOf, hfF, k/LlfOf ul/bf k}f/L ug{dh\$n]pNn}v u/\\$f Sjf/O6Lg zqhLjx?jf6 d\\$t 5g / k}f/L ug{dh\$sf] la?jf :j:ytf cfjZostfx? nufot lgolGqt gg-Sjf/O6Lg zqhLjx? cg\$h ePsf]Joxf]f k\\$ffOft ul/G5 .

#### @ cltl/Qm3f**f**0ff M

#### #= lg; end0f÷lg; end0f pkrf/

pkrf/ u/\rightarrow{\frac{1}{3}} \lightarrow{\frac{1}{3}} \lightarrow{\

/; folgs -; lqmo tTj x?\_ M cj lw / tfkqmd M

sG; GG}kg M cltl/Qm hfgsf/L M

lg/Llf0f u/\frac{1}{3}f]ldlt M

hf/L u/\frac{1}{3}f]ldlt M

 $IdIt = = = = bI_V \% lbg leq kgMlgsf; Lul/; Sg'kgI_V .$ 

hf/L u/\rightarrow{ff}:yn \text{ M cflwsfl/s 5fk \text{k\psiffsq hf/L ug]clwsf/Lsf}}

b:tvtM

gfdM

kbM

cg; rl-!#

-lgod \* sf]pklgod #\_ ; & ; DalGwt\_

la?jf:j:ytfkdf0fkqlbgpkoQmgb[vPdflbg]; \congrelongs[9fFf]

gkfn;/sf/

slif tyf; xsf/L dlqfno

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afnL; AlfOf lgb≱gfno

/fli6@ KnfG6 Sjf/Q6f0g sfoqnd

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=	==	==	==	==	==	==	===	

#### ljifoMla?jf:j:ytf kdf0fkq lbg pkoQmgb[vPsf]hgfsf/L u/fPsf].

 $tkf0f_1]b_1xfosf_1|a?jf_1k_0pkh, afof_1f_1hsn scot_1pkh, afof_1f_1hsn scot_1pkh, afof_1pkh, afof$ 

la?jf:j:ytfk@f0fkq dfu ul/Psf]a:tsf]laa/0fl						
j:t'	kl/df0f -tfjn÷; \of_	kf\$fx?sf]; \\\				

klxrfg IrGx	lgsf; Lug <b>{</b> dhs	lahs ; \of
lg/Llf0f u/\$f]ldlt	lg/LIf0f u/\sf]:yfg	s6; f0gd[j6sf]Ijj/0f

## ab/ ug[sf]sf/0f

- k]f/L ug[dhssf]k]f/L zt{? cg?k gePsf]
  pkrf/ kefjsf/L gePsf]
  sfuhftx? ckof{t jf cflwsf/Ls gePsf]

ldltM

sfoffosf]5fkM

- Clo

lg0f() ug{clwsf/lsf}-

b:t∨tM

gfd y/M

kbM

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#### cg; rl-!\$

-lgod ( sf]pklgod -!\_ ; E ; DalGwt\_

kf/jxgdf/x\f sG; f0gd\f n\fg cgdltsf]nflu lbg]lgj\fgsf]9fFf

lgjøg; ₩of M

-sfofho kofhgsf]nflu dfq\_

>l sfoffio k¢lVHo,"

#### lj ifoMkf/jxgdf /x\forallfig]sG; f0gd\forallfig g\kfnsf]af6f]eP/ n\hfg]cg\text{dlt kf\text{fm}}.

 $b \fo jdf \$ 

- != <u>sG; f0gd[6df /xsf a:tsf]Ij j /0f</u>
  - -s\_jlp, khgg la?jfx?
  - -v\_ pkefljo j:t'
  - -u\_k\pfi\uzfnfsf:k\ll; d\partia, j fofi\pfi\nsn s66k\partia, nfebfos sl/f
  - $-3_c c_0 -= = = = p_n y ug_1$
- @= lgsf; lstf\sf]gfd / 7\unifgf M
- #= btf{gDa/÷; :+yf M
- \$= Kofg g≠M
- %= kl/ro; \(\forall \) -/fxbfgl]jf gful/stfsf]k\(\psi \)f0fkqsf]; \(\forall \) of\_ M
- $\sim$  InP/ hfg]AolQmsf]gfd / 7Jufgf M
- &= j:tsf]j}flgs gfd M

- \*= j:tsf]; fwf/0f gfd M
- (= hft M
- !)=  $kI/df0f \div dfqf$  -sh  $tfin_M dipks 6q == sin I == ufid == 0sf0{==}$
- !!=  $kI/df0f \div dfqf z4 tfin_Mdiks 6g == sinl == ufid == 0sf0{==}$
- !@= pTklQsf]dhs M
- !#= rnfgL u/\st]\dhs -sl66\ckm l; kd\f6\_ M
- !\$= rnfgl u/\$f]lj b**½**l j Gb/ufx M
- !‰ kj≱gfsf ÷ ljGb'M
- !^= kf\sfx?sf]; \(\text{Wof} / \text{Ij j / 0f M}\)
- !&= klxrfg lrGx M
- !\*= ; fwgsf]lsl; d M kfglhxfh xj f0(\hxfh ; 8s ; j f/L /\h) ofq\fixs
- !(= ; fwgsf]gfd M
- @)= cfudg ldlt M
- @!= clitd uitJo:yn M

#### 3f**f**0ff

dfly pl\nlvt ljj/0fx? d\h\xidln]hfg]a\emptyrgl, \text{Dd 7ls}; f\emptyrgl, \text{k0f}\sg\ kf/j xgdf /x\striplef]j:tsf] sG; f\text{0gd\gamma\gammasf}kms\f kqsf]nflu cfj\text{Zos xg; Sg] sfof\hon]dfu u/\striplef] sg\klg ; \text{Da4 hfgsf/L tyf}; \text{Da1Gwt sfuhftx? pkn\text{Aw u/fpg}}5\ddots\f\emptyref.

	<u>lgj (ssf.)-</u>
ldltM	b:t∨t
:yfgMM	gfd y/ M
-k]f/Lstf{; :yf ePdf ; :yfsf]5fk_	kbM

cg; rL-!%

-lgod ( sf]pklgod #\_ ; u ; DalGwt\_

kf/j xgdf /x\f sG; f0gd\f6sf]n\hfg]cgdltkqsf]9\fr

gkfn;/sf/

slif tyf; xsf/L dGqfno

s**[**if Ij efu

afnL; AlfOf lgb≵gfno

/fli6@ KnfG6 Sj f/G6f0g sfo@md

===sfoffio

cgdltkq ; Wof M

>| ======

#### lj ifoMcgdlt lb0fsf].

b) fo jdf] hdsf] la?jfh6o pkh jf c6o j:tsf] kf/j xgdf /x\$f]s6; f0gd] 6 g| kfnsf] af6f] eP/ ————— dhsdf n| hfgsf] nflu cgdltk kfpli elg | bg' ePsf] | lgj | bg pk/ sf/afxl xlff b) kfosf zt{tyf cj:yfsf] clwgdf /xl To:tf]s6; f0gd] 6 g| kfnsf] af6f] eP/ n| hfg | la?jf ; A | f0f | Pg, @)^\$ sf] bkmf | # sf] pkbkmf # tyf | la?jf ; A | f0f | lgodfj nl, @)^^ sf] | lgod ( sf] pklgod # adf| hd cgdlt | b0| psf] 5 .

k]f/lstf\f]gfd / 7\fgfM lgsf; lstf\f]gfd / 7\fgfM la?jf jf la?jfhGo pkh jf cGo j:tsf]ljj/OfM -s\_; fwf/Of gfdM

-v\_j}flgs gfdM

-u\_ kl/df0fM

-3\_ Kff\sfx?sf]; \text{\text{WofM}}

```
pTklQsf]dhsM
                 kjż; Wofsf]lan / ldltM
kjż gfsfM
                 lg/llf0f u/$f]ldltM
                 k)f/L Ohfhtkq ; WofM
k)f/L Ohfhtkqsf]axfnL cj lwM
                 la?jf:j:ytfkdf0fkq;WofM
                 cfudg IditM
                 p2]oli
                 clitd pkofum
                 klxrfg lrGxM
                 9j fgLsf]; fwgsf]lsl; d / ; WofM
                  kf/axgdf /xsf sG; f0gdq6 nhfg]; DaGwL lj zjf zt{l6Kk0flx?
                       -S_
                       -V_
                       -u_
hf/L u/\sf]ldlt / :yfg M
                                                                      cgdlt lbg{clwsf/lsf}-
sfof(nosf) 5fk
                                                                      b:tvtM
                                                                      gfd y/M
                                                                      kbM
```

# cg; rl-!^

-lgod !( sf]pklgod -%\_ ; & ; DalGwt\_

# cleofy kqsf]9fFf

	cleofykq	btf{g <del>-</del> ₩
		-sfof(non]eg[
d2f x∯]clwsf/l	. >l ==== ; dlf la?jf ; #lf0f P <b>\b</b> , @)^\$ sf]bknf u/ <b>\\$</b> f]. <u>cleof<b>\b</b>kq</u> @) == ; fnsf]gDa/M====	@& sf]pkbknf -#_ adf¶hd bfo/
=	gkfn;/sf/	= j fbl
!₌	<u>lj ?4</u>	
<u>@:</u>		
#=	= =====================================	kl tjfbl
	d2f₩	
s <b>ż</b> sf]Aox	<u>cf7f</u> M	
!_		
@_		
#_		

# cleoflum ; ab kdfofn b; l kdfof tyf ck/fw; u ; DalGwt rlh j:t'-M uj fxM b]g -s\_ -v\_ -u\_

; **Gg**[]

-S\_

-3\_

-V\_

b; lsf]; fdfg jf ck/fw; ₩ k¢lf0f nfllg]c? rlh j:tM -S\_

	•	•
_	١	,

-U\_

k|t't sfuh kqx?₩

-S\_

-V\_

-u\_

of]cleofly kqaf6 sf/j fxl z? ug{cbfnt;  $\psi$  ; fb/ cg/fly ul/65 .

sfofho 5fkl-

lg/llfssf}-

b:t∨t⊮

gfd₩

bhf{₩

sfoffo №

ldlt ₩

- $\label{eq:biblow} $$ bi|6JoM-!_ txlssftaf6 cleoOmblivPsf; asf]gfd, y/, jtg lj?4 v08df l; nl; nf gDa/ldnf0{ nigk5{.} }$ 
  - -@\_ ; ab kфf0f sfuhsf]xsdf hf]ePsf]dflysf]9fFfdf ldnf0{n¶gk5{.