

RET/15/Test B**748****Mycology & Plant Pathology****80**

Question Booklet No.

(To be filled up by the candidate by **blue/black ball-point pen**)Roll No.

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Roll No. (Write the digits in words)

Serial No. of OMR Answer Sheet

Day and Date

(Signature of Invigilator)

INSTRUCTIONS TO CANDIDATES(Use only **blue/black ball-point pen** in the space above and on both sides of the **Answer Sheet**)

1. Within 10 minutes of the issue of the Question Booklet, Please ensure that you have got the correct booklet and it **contains** all the pages in correct sequence and no page/question is missing. In case of faulty Question Booklet, bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.
2. Do not bring any loose paper, written or blank, inside the Examination Hall **except the Admit Card without its envelope.**
3. A separate Answer Sheet is given. **It should not be folded or mutilated. A second Answer Sheet shall not be provided.**
4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.
5. On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.
6. No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR sheet and Roll No. and OMR sheet No. on the Question Booklet.
7. Any changes in the aforesaid-entries is to be verified by the invigilator, otherwise it will be taken as **unfair means.**
8. This Booklet contains 40 multiple choice questions followed by 10 short answer questions. For each MCQ, you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by pen as mentioned in the guidelines given on the first page of the Answer Sheet. For answering any five short Answer Questions use five Blank pages attached at the end of this Question Booklet.
9. For each question, darken only one circle on the Answer Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect.
10. Note that the answer once filled in ink cannot be changed. If you **do not wish to attempt** a question, leave all the circles in the corresponding row blank (such question will be awarded zero marks).
11. For rough work, use the inner back page of the title cover and the blank page at the end of this Booklet.
12. Deposit both OMR Answer Sheet and Question Booklet at the end of the Test.
13. You are not permitted to leave the Examination Hall until the end of the Test.
14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

Total No. of Printed Pages : 15

FOR ROUGH WORK



Research Entrance Test – 2015

No. of Questions : 50

Time : 2 Hours

Full Marks : 200

- Note :** (i) This Question Booklet contains **40** Multiple Choice Questions followed by **10** Short Answer Questions.
- (ii) Attempt as many MCQs as you can. Each MCQ carries **3 (Three)** marks. **1 (One)** mark will be deducted for each incorrect answer. Zero mark will be awarded for each **unattempted** question. If more than **one** alternative answers of MCQs seem to be approximate to the correct answer, choose the closest one.
- (iii) Answer only 5 Short Answer Questions. Each question carries **16 (Sixteen)** marks and should be answered in **150-200** words. Blank **5 (Five)** pages attached with this booklet shall only be used for the purpose. Answer each question on separate page, after writing Question No.

1. "Fluid mosaic model" relates to the structure of :
 - (1) Cell wall
 - (2) Protoplasm
 - (3) Plasma membrane
 - (4) Nucleic acid
2. Spongy tissue of mango is a :
 - (1) Bacterial disease
 - (2) Physiological disease
 - (3) Viral disease
 - (4) Fungal disease
3. A purpose of initiating a conscious and purposeful action is called :
 - (1) Education
 - (2) Motivation
 - (3) Action
 - (4) Coordination
4. Yellow colour of egg is due to :
 - (1) Carotene
 - (2) Xanthophyll
 - (3) Anthocyanin
 - (4) Vitamin B
5. During prophase-I of meiosis crossing over occurs at :
 - (1) Zygotene
 - (2) Pachytene
 - (3) Diplotene
 - (4) Diakinesis
6. In which crop the use of Blue-Green Algae as a bio-fertilizer will be most useful ?
 - (1) Maize
 - (2) Potato
 - (3) Rice
 - (4) Sugarcane
7. Lycopene pigment is present in :
 - (1) Beetroot
 - (2) Tomato
 - (3) Radish
 - (4) Chilli
8. Ooze test is done to detect :
 - (1) Bacterial disease
 - (2) Fungal disease
 - (3) Viral disease
 - (4) All of these
9. Number of chromosome in wheat endosperm is :
 - (1) 21
 - (2) 42
 - (3) 63
 - (4) 14
10. Acridine orange is used for inducing :
 - (1) DNA denaturation
 - (2) Mutagenesis
 - (3) Chiasma formation
 - (4) Bacterial transduction

11. Which of the following is **not** a systemic fungicide ?
 (1) Dithane M-45 (2) Vitavax (3) Tilt (4) Metalaxyl
12. Which one of the following is not a Basidiomycetes ?
 (1) *Polyporus frondosus* (2) *Ustilago nuda*
 (3) *Chaetomium globosum* (4) *Puccinia graminis f. sp. tritici*
13. Which of the following Ascomycetes does **not** possess mycelium ?
 (1) *Blumeria graminis* (2) *Erysiphe cichoracearum*
 (3) *Glomerella tucumanensis* (4) *Saccharomyces cerevisiae*
14. Which one of the following is **not** a downy mildew fungus ?
 (1) *Bremia lectuca* (2) *Uncinula necator*
 (3) *Sclerospora graminicola* (4) *Plasmopara viticola*
15. Which of the following fungicide is widely recommended for seed treatment ?
 (1) Copperoxychloride (2) Dithane Z-78
 (3) Thiram (4) Sulfex
16. The perfect stage of *Rhizoctonia solani* is
 (1) *Thanatephorus cucumeris* (2) *Corticium rolfsii*
 (3) *Hypocrea rufa* (4) *Emericella nidulans*
17. Which one of the following is **not** a viroid disease ?
 (1) Coconut Cadang - Cadang (2) Potato Spindle Tuber
 (3) Citrus Greening (4) Citrus Exocortis
18. Bordeaux mixture was discovered by
 (1) Robert Koch (2) Anton de Bary
 (3) Pierre M. Millardet (4) Adolf Mayer
19. Cleistothecia is produced in
 (1) Ascomycetes (2) Basidiomycetes
 (3) Zygomycetes (4) Oomycetes

20. Pinwheel inclusion bodies are formed in
- | | |
|--------------------------|----------------|
| (1) Tobacco Mosaic Virus | (2) Reovirus |
| (3) Caulimovirus | (4) Poty Virus |
21. The colour of Tag used for production of foundation seed
- | | |
|-------------------|-----------------|
| (1) Golden Yellow | (2) Red Colour |
| (3) White Colour | (4) Blue Colour |
22. Badana virus is
- | | |
|-----------------------------|-----------------------------|
| (1) Bacilliform dsDNA virus | (2) Bacilliform ssRNA virus |
| (3) Rigid rod ssRNA virus | (4) Isometric dsRNA virus |
23. ISTA stands for
- (1) Indian Seed Testing Association
 - (2) International Seed Testing Association
 - (3) Internal Seed Testing Association
 - (4) International Seed Terminology Association
24. Example of cultural practice
- | | |
|---------------------|------------------------|
| (1) Soil fumigation | (2) Seed treatment |
| (3) Crop rotation | (4) Foliar application |
25. Aflatoxin is produced by
- | | |
|----------------------------------|-------------------------------|
| (1) <i>Albugo candida</i> | (2) <i>Aspergillus flavus</i> |
| (3) <i>Trichoderma harzianum</i> | (4) <i>Ceratocystis ulmi</i> |
26. Black rot of crucifers is caused by
- (1) *Ralstonia solanacearum*
 - (2) *Xanthomonas campestris* pv. *campestris*
 - (3) *Erwinia carotovora* subsp. *atroseptica*
 - (4) *Pseudomonas fluorescens*

27. Which of the following fungus does **not** produce zoospore ?
- (1) *Pythium aphanidermatum* (2) *Albugo candida*
 (3) *Uncinula necator* (4) *Plasmopara viticola*
28. The nature of Tobacco Mosaic Virus is
- (1) Persistent (2) Semi - persistent
 (3) Non - persistent (4) None of the above
29. Which one of the following is **not** a resistant gene for a fungal pathogen ?
- (1) *Sr33* (2) *Xa21*
 (3) *Cf9* (4) *Hm1*
30. Which one of the following is a non-host-specific toxin?
- (1) Victorin (2) AM-toxin (3) HC-toxin (4) Tabtoxin
31. Type III effector system is present mostly in
- (1) Plant Symbiotic Bacteria
 (2) Plant Pathogenic Bacteria
 (3) Plant Growth-Promoting Bacteria
 (4) Plant Associated Nitrogen Fixing Bacteria
32. Common scab of potato is caused by
- (1) *Curtobacterium flaccumfaciens* (2) *Pectobacterium carotovorum*
 (3) *Streptomyces scabies* (4) *Liberobacter asiatica*
33. Management of plant viruses is possible through
- (1) Pathogen derived resistance (2) RNA silencing
 (3) Resistance gene (4) All the above
34. Which one of the following virus disease is **not** transmitted by sap ?
- (1) Tobacco Mosaic Virus (2) Potato Leaf Roll Virus
 (3) Cucumber Mosaic Virus (4) Yellow Vein Mosaic of Okra

35. *Pasteuria penetrans* is a
- (1) Bacterial biological control agent of root-knot nematodes
 - (2) Fungal biological control agent of root-knot nematodes
 - (3) Protozoan biological control agent of root-knot nematodes
 - (4) Algal biological control agent of root-knot nematode
36. In black stem rust (*Puccinia graminis tritici*) of wheat the following infection strategy is observed
- (1) Haploid basidiospore infect wheat, dikaryotic aeciospores infect barberry
 - (2) Haploid aeciospore infect wheat, dikaryotic basidiospores infect barberry
 - (3) Haploid basidiospore infect barberry, dikaryotic aeciospores infect wheat
 - (4) Haploid teliospore infect wheat, dikaryotic basidiospores infect barberry
37. The first fungal avirulence gene was isolated from
- (1) *Helminthosporium carbonum*
 - (2) *Helminthosporium victoriae*
 - (3) *Cladosporium fulvum*
 - (4) *Phytophthora infestans*
38. Planned geographical distribution of major gene for race specific resistance to a pathogen is known as
- (1) Gene deployment
 - (2) Gene pyramiding
 - (3) Gene flow
 - (4) Genetic recombination
39. Tabtoxin produced by *Pseudomonas syringae* pv. *tabaci* targets inhibition of enzyme
- (1) Ornithine carbamoyl transferase
 - (2) Glutamine synthetase
 - (3) Succinate dehydrogenase
 - (4) Phosphokinase
40. The family Geminiviridae does *not* contains the genus
- (1) Mastrevirus
 - (2) Curtovirus
 - (3) Caulimovirus
 - (4) Begomovirus

Attempt any five questions. Write answer in 150-200 words. Each question carries 16 marks. Answer each question on separate page, after writing Question Number.

1. Give a brief account of management of soil borne fungal pathogens.
2. Describe briefly the disease cycle of *Phytophthora infestans*
3. Write a short note of disease escape.
4. Give a general account of management of viral diseases
5. Write a short note of cell wall degrading enzymes produced by fungi.
6. Write a brief history on discovery of synthetic fungicides.
7. Give a brief account on host plant resistance against phytopathogens.
8. Describe recent biotechnological interventions in plant disease management.
9. Give a brief account of biological management of plant diseases.
10. Give a brief account of phytoplasma and their management strategies.

Roll No. :

Q. No. :

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(8)

Roll No. :

Q. No. :

Roll No. :

Q. No. :

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(10)

Roll No. :

Q. No. :

Roll No. :

Q. No. :

FOR ROUGH WORK

