Test Booklet No. _____

**This booklet consists of 150 questions and 20 pages.**

**RGUPET/2025/1004/111**

**RGUPET 2025**
**Common Entrance Test, 2025**
**DOCTOR OF PHILOSOPHY IN PLANT PATHOLOGY**

**Full Marks: 150** **Time: 3 Hours**

Roll No. | | | | | | | | |

Day and Date of Examination: _____

Signature of Invigilator(s) _____

Signature of Candidate _____

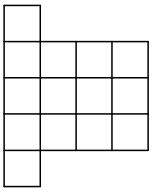
*General Instructions:*

***PLEASE READ ALL THE INSTRUCTIONS CAREFULLY BEFORE MAKING ANY ENTRY.***

1. DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO.
2. Candidate must write his/her Roll Number on the space provided.
3. This Test Booklet contains 150 Multiple Choice Questions (MCQs) from the concerned subject. Each question carries 1 mark.
4. Please check the Test Booklet to verify that the total pages and total number of questions contained in the test booklet are the same as those printed on the top of the first page. Also check whether the questions are in sequential order or not.
5. Candidates are not permitted to enter into the examination hall after the commencement of the entrance test or leave the examination hall before completion of Examination.
6. Making any identification mark in the OMR Answer Sheet or writing Roll Number anywhere other than the specified places will lead to disqualification of the candidate.
7. Candidates shall maintain silence inside and outside the examination hall. If candidates are found violating the instructions mentioned herein or announced in the examination hall, they will be summarily disqualified from the entrance test.
8. In case of any dispute, the decision of the Entrance Test Committee shall be final and binding.
9. The OMR Answer Sheet consists of two copies, the Original copy and the Student's copy.

| | | | | | |
|---|---|---|---|---|---|
| 1 | The "Mission Sudarshan Chakra", recently launched by the Prime Minister of India, primarily relates to | | | | development of a multilayered air and missile defence system |
| | a) a national renewable energy mission | b) a national digital currency mission | c) development of a multilayered air and missile defence system | d) a national mission to modernise Indian Railways | (c) |
| 2 | "Pushpak"- a national mission being implemented by the Indian Institute of Technology, Bombay is related to the development of | | | | Drone technology |
| | a) Helicopters | b) Dairy technology | c) Drone technology | d) Artificial intelligence | c) |
| 3 | North East India's first underwater tunnel project, announced in 2024, is proposed to connect | | | | Numaligarh and Gohpur |
| | a) Dibrugarh and Dhemaji | b) Jorhat and Majuli | c) Numaligarh and Gohpur | d) Guwahati and North Guwahati | c) |
| 4 | Which of the following statements are correct?<br>A. Canada hosted the 51st G7 summit in 2025.<br>B. Four players were honoured with the Khel Ratna Award 2025.<br>C. Sweden was ranked first in Global Innovation Index 2024.<br>D. Operation Sindoor was Launched by India to attack terrorist bases in Pakistan on 7th May 2025. | | | | (a) |
| | a) A, B and D | b) A,B and C | c) Only A | d) All of the above | A, B and D |
| 5 | Which of the followings are correct?<br><br>A. Lip Butan has been appointed as the new CEO of Intel in March 2025<br>B. Shri C P Radhakrishnan has been appointed as the Vice President of India<br>C. India's rank in the Human Development Index 2025 released by UNDP is 99<br>D. India has become the 2nd largest road network in the World. | | | | (d) |
| | a) A and B only | b) A, B and C only | c) A, C and D only | d) A, B, D only | A, B, D only |
| 6 | Which of the following sentences is false?<br><br>A. Palk Strait joins India and Sri Lanka<br>B. The Radcliffe Line is between India and Bangladesh<br>C. The MacMohan Line separates India and China<br>D. The Durand Line is between Iran and Afghanistan. | | | | |
| | a) A, B | b) B, C | c) C, D | d) B, D | (d) |
| 7 | Assertion (A): Eclipses do not occur on all full moon and new moon days.<br>Reason (R): The moon revolves round the earth in an elliptical orbit. | | | | A and R are true but R |

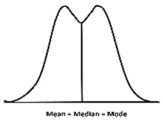
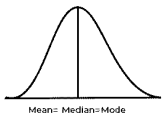
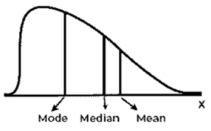
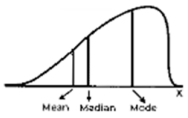
| | | | | | |
|---|---|---|---|---|---|
| | | | | | doesnot explain A |
| | a) A and R are true and R correctly explains A. | b) A and R are true but R does not explain A. | c) A is true R is false | d) R is true but A is false | (b) |
| 8 | Right to equality is a- | | | | Fundamental right |
| | a) fundamental right | b) social right | c) cultural right | d) legal right | (a) |
| 9 | The author of the book "Midnight's Children" is- | | | | Salman Rushdie |
| | a) Shakespeare | b) Leo Tolostoy | c) Salman Rushdie | d) R K Narayan | (c) |
| 10 | Match the organizations with their headquarters:<br><br>A. UNESCO — 1. New York<br>B. WHO — 2. Paris<br>C. UNICEF — 3. Geneva<br>D. IMF — 4. Washington D.C. | | | | |
| | a) A–3, B–2, C–4, D–1 | b) A–2, B–3, C–1, D–4 | c) A–2, B–4, C–3, D–1 | d) A–1, B–3, C–2, D–4 | (b) |
| 11 | He said, "Happy new year!"<br>The correct indirect speech of the above is- | | | | He wished me a happy new year. |
| | a) He said the new year was happy. | b) He wished me a happy new year. | c) He said to me that happy new year. | d) I was wished a happy new year. | (b) |
| 12 | Identify the correct sentence(s) from the following.<br>A. One of my friends is a doctor.<br>B. I don't know nothing about her.<br>C. It is a two-hour journey.<br>D. We will be definitely there at the yesterday's programme. | | | | |
| | a) A, B | b) B, C | c) A, C | d) C, D | (c) |
| 13 | "She drank the _____ milk that was there in the flask." The appropriate quantifier to fill in the blank is- | | | | little |
| | a) all | b) little | c) sour | d) few | (b) |
| 14 | "a/ great /and/ reality/their/ theory/in/there/ disparity/is"<br>The correct reordered meaningful sentence with the above jumbled words/phrases is-<br>P. There is a great theory and their reality in disparity.<br>Q. There is a great disparity in their theory and reality.<br>R. Their great disparity is in a theory and reality there.<br>S. Their great theory is a reality and in disparity there. | | | | There is a great disparity in their theory and reality. |
| | a) P | b) Q | c) R | d) S | (b) |
| 15 | The correct match of synonyms and antonyms is: | | | | A-ii, B-iii, |

| | | | | | |
|---|---|---|---|---|---|
| | <table><tr><td>A. Futile</td><td>i. Help</td></tr><tr><td>B. Generic</td><td>ii. Effective</td></tr><tr><td>C. Hinder</td><td>iii. Individual</td></tr><tr><td>D. Inception</td><td>iv. Termination</td></tr></table> | | | | C-i, D-iv |
| | a) A-i, B-ii, C-iii, D-iv | b) A-iii, B-ii, C-iv, D-iii | c) A-iv, B-iii, C-i, D-ii | d) A-ii, B-iii, C-i, D-iv | (d) |
| 16 | The total number of squares in the following figure is:<br>  | | | | 22 |
| | a) 24 | b) 20 | c) 22 | d) 18 | (c) |
| 17 | Fill in the blank in the following pattern.<br>ELFY GLHX ILJW -------- MLNU | | | | KLLV |
| | a) KLLV | b) KLMX | c) JLLV | d) JLMX | a) |
| 18 | Raghav introduces Vineet as the only son of the only brother of his father's wife. How Raghav and Vineet are related? | | | | cousin |
| | a) brother | b) cousin | c) uncle | d) son-in-law | (b) |
| 19 | Which two numbers should be interchanged to make the given equation mathematically correct?<br>$3 \times 6 + 72 \div 8 - 24 = 12$ | | | | 6, 8 |
| | a) 6, 8 | b) 6, 24 | c) 3, 8 | d) None | (a) |
| 20 | If BANKER is coded as CAOKFR, then how would LAWYER be coded? | | | | MAXYFR |
| | a) LBWZES | b) LBWYFR | c) MAXYFR | d) MAXZES | c) |
| 21 | Same error occurs at the same size in every measurement, and such errors can only be eliminated either by thinking through the sources of problems and removing them. This type of error is termed as: | | | | |
| | a) Random errors | b) Systematic errors | c) Cascading errors | d) Perpetual errors | b |
| 22 | Hypothesis-driven research begins with a hypothesis. A hypothesis is a statement about the world that can be true or false, and whose truth is being tested. | | | | |
| | a) A valid hypothesis is based on 'that exists' | b) A hypothesis is a positive conclusion | c) A hypothesis can never be tested | d) A valid hypothesis must be falsifiable | d |
| 23 | Which of the following statements that could be considered as valid scientific hypotheses?<br><br>A. Eating two ounces of olive oil a day decreases the odds of contracting heart disease. | | | | Answer |

| | | | | | |
|---|---|---|---|---|---|
| | B. What is the best fertilizer to use to get large and tasty tomatoes?<br>C. Macs are better than PCs.<br>D. Briar's Aspirin cures headaches faster than RCS Aspirin. | | | | |
| | a) A, B | b) A, B, C | c) A, D | d) B, C | c |
| 24 | Relate the 'function or relationship' (A) and 'comment' (B) and select the appropriate answer<br><br>A: Find how the speed of sound in air at fixed pressure depends upon air temperature.<br><br>B: The control variable is temperature, and the response variable is sound speed. | | | | Answer |
| | a) Functional relationship is correct and the comment is true for the relationship | b) Functional relationship is incorrect but the comment is true for the relationship | c) Functional relationship is correct but the comment is false for the relationship | d) Neither the functional relationship is correct nor the comment is true | a |
| 25 | Relate 'sampling design' and its 'method' | | | | Answer |

| Sampling Design | Method |
|---|---|
| A. Deliberate | i. Sample collected as information received and survey progresses |
| B. Simple random | ii. sample drawn from a heterogeneous group |
| C. Stratified | iii purposive selection of particular units |
| D. Sequential | iv. very item in the population has an equal chance of inclusion |

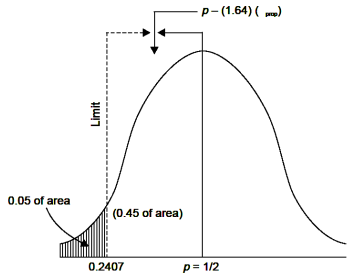
| | | | | |
|---|---|---|---|---|
| | a) A-iii, B-iv, C-ii, D-i | b) A-ii, B-iv, C-iii, D-i | c) A-i, B-iii, C-ii, D-iv | d) A-iii, B-ii, C-iv, D-i | a |
| 26 | Number of observations in a normal distribution is 1000. How many observations will be there between $\mu+1\sigma$ and $\mu-1\sigma$ | | | | Answer |
| | a) 500 | b) 680 | c) 720 | d) 950 | b |
| 27 | Which of the following are reasons for citing a paper?<br><br>A. use its ideas, definitions, terms in a Research<br>B. provides upcoming facts regarding undergoing Research Question.<br>C. to adopt part/full methodology it adopted for a certain task.<br>D. to refer to data also used in Current Research. | | | | Answer |
| | a) A, B, C | b) B, C, D | c) A, C, D | d) A, B, D | c |
| 28 | Scholars who wish to meet publication expectations mostly resort to a variety of techniques to increase their output and crank up their citation ranking, which are not considered ethical. Identify these techniques:<br><br>A. Gift authorship<br>B. Extensive experiments<br>C. Salami Slicing<br>D. Extensive referencing | | | | Answer |
| | a)A, B, C | b) A, B, D | c) B, C, D | d) A, C, D | d |
| 29 | Match the references (APA 7 style): | | | | Answer |

| | | | | | |
|---|---|---|---|---|---|
| | A. Journal Article | i. Edwards, A. A., Steacy, L. M., Siegelman, N., Rigobon, V. M., Kearns, D. M., Rueckl, J. G., & Compton, D. L. (2022). Unpacking the unique relationship between set for variability and word reading development: Examining word- and child-level predictors of performance. *Journal of Educational Psychology*, *114*(6), 1242–1256. https://doi.org/10.1037/edu0000696 | | | |
| | B. Authored Book | ii. Levenson, H., Jinich, S., Vaz, A., & Rousmaniere, T. (2025). *Deliberate practice in emotionally focused couple therapy*. American Psychological Association. https://doi.org/10.1037/0000436-000 | | | |
| | C. Webpage | iii. Zeleke, W. A., Hughes, T. L., & Drozda, N. (2020). Home–school collaboration to promote mind–body health. In C. Maykel & M. A. Bray (Eds.), *Promoting mind–body health in schools: Interventions for mental health professionals* (pp. 11–26). American Psychological Association. https://doi.org/10.1037/0000157-002 | | | |
| | D. Edited Book Chapter | iv. Taras, Z. (2024, May 30). *Situational irony can be funny, tragic or even terrifying.* howstuffworks. https://entertainment.howstuffworks.com/arts/literature/situational-irony.htm | | | |
| | a) A-i, B-ii, C-iv, D-iii | b) A-ii, B-iii, C-iv, D-i | c) A-iii, B-ii, C-i, D-iv | d) A-i, B-ii, C-iii, D-iv | a |
| 30 | Which one of the following refers to positive skewness? | | | | |
| | a)  | b)  | c)  | d)  | c |
| 31 | How much is the degree of freedom for the following data table? | | | | Answer |

| *S. No.* | $X_i$ | *Hypothesised mean* $m_{H_0} = 578$ *kg.* | $D_i = (X_i - \mu_{H_0})$ | $D_i^2$ |
|---|---|---|---|---|
| 5 | 572 | 578 | –6 | 36 |
| 6 | 578 | 578 | 0 | 0 |
| 7 | 570 | 578 | –8 | 64 |
| 8 | 572 | 578 | –6 | 36 |
| 9 | 596 | 578 | 18 | 324 |
| 10 | 544 | 578 | –34 | 1156 |
| $n = 10$ | | | $\sum D_i = -60$ | $\sum D_i^2 = 1816$ |

| | | | | | |
|---|---|---|---|---|---|
| | a) 8 | b) 9 | c) 10 | d) 18 | b |
| 32 | Find out the Null hypothesis for the given table | | | | Answer |

| S. No. | $X_i$ | Hypothesised mean $m_{H_0} = 578$ kg. | $D_i = (X_i - \mu_{H_0})$ | $D_i^2$ |
|---|---|---|---|---|
| 5 | 572 | 578 | –6 | 36 |
| 6 | 578 | 578 | 0 | 0 |
| 7 | 570 | 578 | –8 | 64 |
| 8 | 572 | 578 | –6 | 36 |
| 9 | 596 | 578 | 18 | 324 |
| 10 | 544 | 578 | –34 | 1156 |
| $n = 10$ | | | $\sum D_i = -60$ | $\sum D_i^2 = 1816$ |

| | | | | | |
|---|---|---|---|---|---|
| | a) $\mu_{H0} = 578$kg. | b) $\mu_{H0} \neq 578$kg. | c) $\mu_{H0} = -578$kg. | d) $\mu_{H0} = \pm 578$kg. | a |
| 33 | What will be sum of the deviations of observations from the regression line? | | | | Answer |
| | a) -∞ | b) 0 | c) +∞ | d) undefined | b |
| 34 | Derive from the following diagram<br>  <br><br>Assertion: In this normal distribution 5 percent of the sample are rejected.<br><br>Justification: It shows a two tailed hypothesis test model at 90 percent confidence level | | | | Answer |
| | a) Assertion is true and justification explains the Assertion | b) Assertion is false but justification explains the Assertion | c) Assertion is true and justification is true but does not explain the Assertion | d) Assertion is true and justification for the Assertion is incorrect | d |
| 35 | Match into pairs for the Statistical method with appropriate details mentioned:<br><br>Statistical method / Details<br>A. Correlation — i. Order 2, 3, 4, …….<br>B. Polynomial regression — ii. More than two population on same characteristics<br>C. ANOVA — iii. Test of homogeneity<br>D. Chi square — iv. Requires only two variables | | | | Answer |
| | a) A-i, B-ii, C-iii, D-iv | b) A-iv, B-i, C-ii, D-iii | c) A-iv, B-ii, C-i, D-iii | d) A-iii, B-i, C-ii, D-iv | b |

| | | |
|---|---|---|
| 36 | Match the following and give the correct answer:<br><br>A. Nature of Interaction holding atom — i Kinetics<br>B. Rate of Chemical Reaction — ii Bond<br>C. Increase the rate of reaction — iii Lipid | Answer |

| | | | | | |
|---|---|---|---|---|---|
| | D. hydrocarbon chain insoluble in water iv catalyst | | | | |
| | a) A(i), B(ii), C(iii), D(iv) | b) A(ii), B(i), C(iv), D(iii) | c) A(iii), B(ii), C(i), D(iv) | d) A(ii), B(iii), C(i), D(iv) | ( b) |
| 37 | In a simple harmonic motion, the velocity of a particle is maximum at: | | | | Answer |
| | a) Mean position | b) Extreme position | c) Halfway between mean and extreme | d) At all positions | (a) |
| 38 | In a double-slit experiment, if the distance between slits is doubled, what happens to the fringe spacing on the screen? | | | | Answer |
| | a) Fringe spacing halves | a) Fringe spacing doubles | c)Fringe spacing remains the same | d)Fringe spacing quadruples | (a) |
| 39 | A block slides down a frictionless inclined plane. Which of the following statements is true? | | | | Answer |
| | a) Mechanical energy is not conserved | b) Potential energy decreases, kinetic energy increases | c) Kinetic energy decreases | d)Acceleration is zero | ( b) |
| 40 | Which of the following is true for a photon in a vacuum? | | | | Answer |
| | a) It has mass but no energy | b) It has energy but no rest mass | c) It has rest mass and energy | d) It can be accelerated by a force | (b) |
| 41 | If $f(x) = \begin{cases} \{\lvert x-2\rvert)/(x-2)\}, & x \neq 0 \\ 0, & otherwise \end{cases}$ | | | | Answer |
| | a) $-1$ | b) $1$ | c) $0$ | d) does not exist | d |
| 42 | If $y = x^5 - 5x^4 + 5x^3 - 1$, then the value of $\frac{d^6y}{dx^6}$ is | | | | Answer |

| | | | | | |
|---|---|---|---|---|---|
| | a) $120x - 120$ | b) 120 | c) 0 | d) cannot be evaluated. | c |
| 43 | Which of the following is/are not true for a function $f$ defined on closed interval $[a, b]$ to satisfy Rolle's theorem?<br>A. $f$ is continuous on closed interval$[a, b]$.<br>B. $f$ is differentiable on the open interval $(a, b)$<br>C. $f(a) = f(b)$<br>D. $f(k) = 0$ for at least one $k \in [a, b]$. | | | | Answer |
| | a) A and B | b) only D | c) B and C | d) Only C | b |
| 44 | A group which satisfies commutatively property is known a | | | | |
| | a) Abelian group | b) Quotient group | c) Coset group | d) Normal group | a |
| 45 | Let $M^T$ denotes transpose matrix of $M$ and $I$ is identity matrix. Match the following:<br>A. $M$ is idempotent — i. $M = M^T$<br>B. $M$ is symmetric — ii. $M = -M^T$<br>C. $M$ is skew-symmetric — iii. $M^2 = I$<br>D. $M$ is involution — iv. $M^2 = M$ | | | | Answer |
| | a) A-iv, B-i, C-iii, D-ii | b) A-i, B-iv, C-ii, D-iii | c) A-iv, B-i, C-ii, D-iii | d) A-iv, B-ii, C-i, D-iii | c |
| 46 | Relate the statements:<br>A: Assertion–SSDs are faster than HDDs.<br>B: Justification–Because SSDs use flash memory instead of spinning disks. | | | | Answer |
| | a) Both A and B are true, and B is the correct explanation of A | b) Both A and B are true, but B is NOT the correct explanation of A | c) A is true, but B is false | d) A is false, but B is true | (a) |
| 47 | Match the pairs:<br>A. Machine Learning — i Enables machines to understand and process human language<br>B. Natural Language Processing (NLP) — ii Uses data to learn and improve predictions automatically<br>C. Computer Vision — iii Analyzes and interprets visual data like images and videos<br>D. Expert Systems — iv Mimics human decision-making using rules | | | | Answer |

| | | | | | |
|---|---|---|---|---|---|
| | | and knowledge base | | | |
| | a) A – iv, B – i, C – iii, D – ii. | b) A – iv, B – iii, C – i, D – ii. | c) A – ii, B – i, C – iii, D – iv. | d) A – iii, B – i, C – iv, D – ii. | (c) |
| 48 | Which programming language is widely used for AI and ML development? | | | | Answer |
| | a) Python | b) JavaScript | c) C# | d) HTML | (a) |
| 49 | Which of the following statement is true: | | | | Answer |
| | a) A byte is made up of 16 bits. | b) ROM is volatile memory that loses data when power is switched off. | c) A compiler translates high-level code into machine code line by line. | d) A firewall is used to protect a computer network from unauthorized access. | (d) |
| 50 | What is a network of networks called? | | | | Answer |
| | a) Intranet | b) Internet | c) WAN | d) LAN | (b) |

51 Khaira disease of rice is caused due to the deficiency of
a) Boron b) Zinc c) Magnesium d) Manganese

52 Which component is commonly found in fungal cell walls?
a) Peptidoglycan b) Chitin c) Lignin d) Pectin

53 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below
(A) Wilt is caused by *Fusarium* sp.
(R) *Fusarium* is a sclerotial pathogen.
a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.

54 Please match the correct answer

| | |
|---|---|
| A. Citrus canker | i Fungi |
| B. Rust of wheat | ii Bacteria |
| C. Yellow vein mosaic | iii Virus |
| D. Root knot | iv Nematode |

a) A - i, B - ii, C -iii, D-iv b) A - ii, B - i, C -iii, D-iv c) A - iii, B - ii, C -i, D-iv d) A - iv, B - iii, C -ii, D-i

55 When are seeds allowed to enter a country without certification?
1. When they are pathogen-free.
2. When they are certified by a foreign authority.
3. When they are accompanied by a phytosanitary certificate.
4. When they are of local origin.
5. When they are visibly diseased.
a) Only 1, 2 and 5 b) Only 2, 3 and 5 are c) Only 1, 2 and 3 are d) Only 1, 2, 3 and 4

| | | | |
|---|---|---|---|
| are true. | true. | true | are true |

56 Which term describes a network of hyphae?

| | | | |
|---|---|---|---|
| a) Thallus | b) Mycelium | c) Sclerotium | d) Rhizomorph |

57 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

(A) Tulip Breaking Virus reduce market value of tulip.

(R) Tulip Breaking Virus increase market value of tulip.

| | | | |
|---|---|---|---|
| a) Both A and R are true and R is the correct explanation of A. | b) Both A and R are true but R is not the correct explanation of A. | c) A is true but R is false. | d) A is false but R is true. |

58 Please match the correct answer

| | |
|---|---|
| A. Bordeaux mixture | i 1885 |
| B. Irish Potato Famine | ii 1844 |
| C. Bengal Famine | iii 1943 |
| D. Golden Nematode | iv 1941 |

| | | | |
|---|---|---|---|
| a) A - i, B - ii, C -iv, D-iii | b) A - ii, B - i, C -iii, D-iv | c) A - iii, B - ii, C -i, D-iv | d) A - i, B - ii, C -iii, D-iv |

59 Please select the true statement

ITCC stands for

| | | | |
|---|---|---|---|
| a) Indian Type Culture Collection. | b) International Type Culture Collection. | c) Indian Type Cell Collection. | d)International Type Cell Collection. |

60 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

(A) Phytophthora is a soil borne pathogen.

(R) Phytophthora producing sclerotia in soil.

| | | | |
|---|---|---|---|
| a) Both A and R are true and R is the correct explanation of A. | b) Both A and R are true but R is not the correct explanation of A. | c) A is true but R is false. | d) A is false but R is true. |

61 Please match the correct answer

| | |
|---|---|
| A.Phyllody | i Virus |
| B. Vein bending | ii Mycoplasma |
| C. Wilting | iii Fungus |
| D. Blast | iv Bacteria and Fungus |

| | | | |
|---|---|---|---|
| a) A - ii, B - i, C -iv, D-iii | b) A - ii, B - i, C -iii, D-iv | c) A - iv, B - iii, C -ii, D-i | d) A - i, B - ii, C -iii, D-iv |

62 Consider about soil treatment chemicals.

1.Complete control of the plant disease is obtained.

2.Complete control of the plant disease is not obtained.

3.The fungal disease is suppressed by the chemical.

4.The fungus always killed by the chemical.

5.Nematicides destroy the nematodes but eggs escape.

| | | | |
|---|---|---|---|
| a) Only 2, 3 and 5 | b) Only 1, 3 and 4 are | c) Only 1, 2 and 5 are | d) All are true |

| | | | | |
|---|---|---|---|---|
| | are true | true | true | |

63 What is the role of haustoria in fungal structures?

| | | | |
|---|---|---|---|
| a) To produce spores | b) To absorb nutrients from the host | c) To support the fungal body | d) To store food reserves |

64 What is the primary mode of nutrition for fungi?

| | | | |
|---|---|---|---|
| a) Photosynthetic | b) Absorptive | c) Ingestive | d) Chemo-synthetic |

65 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below
(A) Bacteria produces endospore.
(R) Endospore are the manifestation of exospore.

| | | | |
|---|---|---|---|
| a) Both A and R are true and R is the correct explanation of A. | b) Both A and R are true but R is not the correct explanation of A. | c) A is true but R is false. | d) A is false but R is true. |

66 Which of the following is NOT a structural defense mechanism in plants against pathogens

| | | | |
|---|---|---|---|
| a) Cuticle and epidermal cells | b) Sclerenchyma cells | c) Phytoalexins | d) Cork layers |

67 Which of the following is a post-infectional structural defense mechanism in plants

| | | | |
|---|---|---|---|
| a) Cuticle | b) Tyloses | c) Waxes | d) Sclerenchyma cells |

68 Which category of fungicides is effective only when used before infection

| | | | |
|---|---|---|---|
| a) Protectants | b) Eradicants | c) Therapeutants | d) Antibiotics |

69 Which of the given diseases is related to Bajra?

| | | | |
|---|---|---|---|
| a) Leaf Rust | b) Late Blight | c) Canker | d) Ergot |

70 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below
(A) Virus infected cells secrete proteins called interferons which protect non -infected cells from further viral infection.
(R) virus is mesobiotic in nature.

| | | | |
|---|---|---|---|
| a) Both A and R are true and R is the correct explanation of A. | b) Both A and R are true but R is not the correct explanation of A. | c) A is true but R is false. | d) A is false but R is true. |

71 Micro and macro conidia are presentin

| | | | |
|---|---|---|---|
| a) *Alternaria* | b) *Aspergillus* | c) *Mucor* | d) *Fusarium* |

72 In which of the following gills arepresent

| | | | |
|---|---|---|---|
| a) *Aspergillus* | b) *Alternaria* | c) *Agaricus* | d) *Mucor* |

73 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below
(A) Cyanobacteria like Nostoc and Anabaena are used as biofertilizers.
(R) Cyanobacteria absorb phosphorus from soil and passes it to crop.

a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.

74 Please match the correct answer

| | |
|---|---|
| A. Parasitic | i Drosera |
| B. Insectivorous | ii Yeast |
| C. Saprophytic | iii Lichen |
| D. Symbiotic | ivLoranthus |

a) A - ii; B - i; C - iii; D - iv b) A - iii; B - ii; C - iv; D - i c) A - iii; B -ii; C - i; D - iv d) A - iv; B - i; C - ii; D – iii

75 Which one is counted as the pest
a) Chemicals b) Biological c) Cultural d) weeds

76 Example of pesticide includes
a) Fungus b) Bacteria c) Nematode d) Insecticide

77 Plant pathology is the study of
a) Bacteria b) Fungi c) Nematodes d) Plant diseases

78 Nature of powdery mildews and downy mildew fungus are
a) Obligate parasite b) Saprophyte c) Facultative parasite d) Facultative saprophytes

79 Mushroom is Enriched food
a) Protein b) Carbohydrates c) Sugar d) Starch

80 Which structure forms at the point of contact between an appressorium and the host cuticle
a) Haustorium b) Penetration peg c) Mycelial knot d) Germ tube

81 Plant viruses often enter their hosts through injuries made by
a) Falling debris b) Pruning cuts c) Insect vectors d) Animal grazing

82 Lenticels serve as a potential entry point for pathogens and are primarily involved in
a) Water absorption b) Gas exchange c) Nutrient transport d) Light absorption

83 Fusaric acid is associated with which type of toxin classification
a) Pathotoxin b) Phytotoxin c) Vivotoxin d) Mycotoxin

84 What is the term for fungi that normally feed on dead material but can infect living hosts?
a) Obligate parasites b) Facultative parasites c) Obligate saprophytes d) Facultative saprophytes

85 What is the technical term for the sexual stage of fungi?
a) Teleomorphic stage b) Imperfect stage c) Holocarpic stage d) Eucarpic stage

86 Which group of plant pathogenic organisms includes both biotic and mesobiotic agents?
a) Fungi b) Bacteria c) Viruses d) Algae

87 What is the purpose of a sclerotium in fungi?

a) To capture sunlight | b) To produce spores | c) To serve as a resistant storage form | d) To absorb nutrients

88 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

(A) All fungus are parasite.

(R) All parasite are fungus.

a) Both A and R are true and R is the correct explanation of A. | b) Both A and R are true but R is not the correct explanation of A. | c) A is true but R is false. | d) A is false but R is true.

89 The disease characterized by abnormal elongation of rice seedlings is

a) Moko disease | b) Wilt disease | c) Bakanae disease | d) Club root disease

90 The first cytokinin isolated was

a) Zeatin | b) Kinetin | c) IPA | d) GA3

91 Please match the correct answer

| | |
|---|---|
| A. Plant virus | iKuru disease |
| B. Animal virus | ii Potato spindle tuber |
| C.Viroids | iii Polio |
| D. Prions | iv Tobacco mosaic |

a) A-(iv), B-(iii), C-(ii), D-(i) | b) A-(iv), B-(ii), C-(iii), D-(iv) | c) A-(iii), B-(iv), C-(i), D-(i) | d) A-(ii), B-(iii), C-(iv), D-(i)

92 Fruit cracking disease in tomatoes is mainly caused due to the deficiency of

a) Copper | b) Boron | c) Zinc | d) Molybdenum

93 Which one is most important factor for development of plant diseases?

a) Animals | b) Human | c) Birds | d) Environmental parameters

94 The green ear is a which type of disease?

a) Bacterial | b) Fungal | c) Viral | d) Protozoan

95 Which scientist developed the Bordeaux mixture to combat downy mildew in vineyards?

a) Pierre-Marie-Alexis Millardet | b) Louis Pasteur | c) Gregor Mendel | d) Anton de Bary

96 What phase follows plasmogamy in the sexual reproduction of fungi?

a) Meiosis | b) Mitosis | c) Karyogamy | d) Germination

97 Which type of asexual spore is typical in *Penicillium*?

a) Zoospores | b) Conidia | c) Sporangiospores | d) Chlamydospores

98 Which of the following is an example of data falsification in research?

a) Accurately reporting | b) Manipulating data to support desired | c) Collaborating with other researchers to | d) Including all relevant data in

| | | | | |
|---|---|---|---|---|
| | experimental results. | conclusions. | verify findings. | research publications. |

99 Which of the following is an example of proper attribution in research?

| | | | |
|---|---|---|---|
| a) Presenting someone else's ideas without acknowledgment. | b) Citing the original source when using someone else's work. | c) Using research findings without permission. | d) Including references in a research paper without verifying their accuracy. |

100. Mancozeb is a formulation of
.

| | | | |
|---|---|---|---|
| a) mancozeb and zinc | b) maneb and zinc ion | c) manganese and zinc | d) maneb and manzate |

101 Which type of resistance is typically governed by a single or a few genes and is race-specific?

| | | | |
|---|---|---|---|
| a) Vertical resistance | b) Horizontal resistance | c)Tolerance resistance | d) Susceptibility resistance |

102 What is the primary mechanism responsible for disease escape in plants?

| | | | |
|---|---|---|---|
| a) Thick cuticles | b) Hypersensitive reaction | c) Early maturity | d) Tissue culture |

103 Which type of fungal thallus is entirely converted into reproductive structures?

| | | | |
|---|---|---|---|
| a) Eucarpic | b) Plasmodial | c) Holocarpic | d) Unicellular |

104 What is a septum in fungi?

| | | | |
|---|---|---|---|
| a) A type of hypha | b) A reproductive structure | c) A partition in a hypha | d) A form of spore |

105 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

(A) *Saccharomyces cerevisiae* is used for making bread.

(R) Fermentation carried out by Yeast enzymes produces $CO_2$.

| | | | |
|---|---|---|---|
| a) Both A and R are true and R is the correct explanation of A. | b) Both A and R are true but R is not the correct explanation of A. | c) A is true but R is false. | d) A is false but R is true. |

106 Please match the correct answer

| | |
|---|---|
| A. Endosperm | i Carpel |
| B. Zygote | ii Haploid |
| C. Stigma | iii Nutrition |
| D. Gametes | iv Fertilisation |

| | | | |
|---|---|---|---|
| a) A- i, B - iv, C -iii, D - ii | b) A - ii, B - iii, C - iv, D - i | c) A - iii, B - iv, C - i, D - ii | d) A - iv, B - iii, C - ii, D –i |

107 Who is considered the father of plant pathology?

| | | | |
|---|---|---|---|
| a) Anton de Bary | b) Louis Pasteur | c) Robert Hooke | d) Gregor Mendel |

108 Most of the plant viruses contains?

| | | | |
|---|---|---|---|
| a) DNA | b) RNA | c) a and b | d) a or b |

109 Plant parasitic nature of fungi was proven by?
a) Anton de Bary b) Louis Pasteur c) P.A. Micheli d) J.F. Kuhn

110 Peach leaf curl is caused by which agent?
a) Virus b) Bacteria c) Phytoplasma d) Fungi

111 Rhizomorph is characteristic to which of the following?
a) *Armallaria* b) *Rhizoctonia* c) *Verticillium* d) *Claviceps*

112 Lemon shaped sporangia is produced by?
a) *Albugo* b) *Phytophthora* c) *Phytium* d) *peronospora*

113 The most sensitive factor for nematode population is?
a) Temperature b) Moisture c) Rainfall d) Light Intensity

114 Red ring disease of coconut is caused by
a) *Rhadinaphelenchusc ocophilus* b) *Bursaphelenchusxylo philus* c) *Ditylenchussimilis* d) *Tylenchulussemipenet rans*

115 Mantek disease of rice is caused by?
a) *Hirschemanni ellaoryzae* b) *Meloidogyneg raminicola* c) *Heteroderaor yzae* d) *Ditylenchusa ngustus*

116 Stem and bulb nematode is
a) *Ditylenchusdi psaci* b) *Ditylenchusa ngustus* c) *Tylenchulusse mipenetrans* d) *Aphelenchoid esbesseyi*

117 Father of seed pathology is
a) Mary Noble b) Paul Neergard c) V. K. Agarwal d) L.C. Doyer

118 State true or False
Wilt causing *Fusarium* sp. in red gram produces
a. Macro conidia
b. Micro conidia
c. Micro, Macro and chlamydospores
d. Chlamydospores
a) Only a b) a and b c) only c d) a and d

119 State true or false
Mycoplasma contains
a. Lipids
b. Sterols
c. Carotenols
d. Lipids and sterols
a) Only a b) a and b c) only d d) a, b and c

120 State true or false
Bdellovibrio are gram negative bacteria eating
a. Gram negative bacteria
b. Gram positive bacteria

c. Viruses
d. Gram positive and viruses

a) Only a b) Only b c) a and b d) only d

121 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

A) The Bengal Famine is a bacterial disease
R) It caused an epidemic in the year 1942

a)Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.

122 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

A) Hollings first reported mycovirus on cultivated mushroom
R) Mycoviruses are viruses infecting fungi

a)Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.

123 Match the pairs

| | | | |
|---|---|---|---|
| A. | Pahala | I. | Boron |
| B. | Heart rot of sugarbeet | II. | Molybdenum |
| C. | Whip tail of cauliflower | III. | Copper |
| D. | Exanthema | IV. | Manganese |

a) A-III, B-I, C-IV, D-II b) A-IV, B-I, C-II, D-III c) A-II, B-I, C-III, D-IV d) A-I, B-IV, C-II, D-III

124 Match the pairs

| | | | |
|---|---|---|---|
| A. | Central Potato Research Institute | I. | New Delhi |
| B. | Indian Type Culture Collection Centre | II. | Bangalore |
| C. | Commonwealth Institute of Biological Control | III. | Mau |
| D. | National Bureau of Agriculturally Important Microorganisms | IV. | Shimla |

a) A-I, B-III, C-II, D-IV b) A-IV, B-I, C-II, D-III c) A-II, B-I, C-III, D-IV d) A-I, B-IV, C-II, D-III

125 The antagonistic activity between two organisms can be studied by

a) Poison food technique b) Dual culture technique c) Selective medium d) EPN

126 The pore size of filters used in the laminar air flow chamber is

a) 0.3 µm b) 0.03 µm c) 3.0 µm d) 1.25 µm

127 The most commonly used mounting medium in permanent slide preparation is

a) Congo red b) Crystal violet c) Lactophenol blue d) Canada balsam

128 The solution used to preserve the green coloured diseased sample of the plant tissue is

a) Copper sulphate b) Zinc chloride c) Zinc sulphate d) Formaldehyde

129 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

A) Aphids are the only known vectors for transmitting plant viruses in non- persistent manner

R) Virus acquisition period is brief and have no latent period

a)Both A and R are true and R is the correct explanation of A. | b) Both A and R are true but R is not the correct explanation of A. | c) A is true but R is false. | d) A is false but R is true.

130 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

A) Short distance movement occurs in plant viruses

R) Intercellular communication is facilitated by plasmodesmata

a)Both A and R are true and R is the correct explanation of A. | b) Both A and R are true but R is not the correct explanation of A. | c) A is true but R is false. | d) A is false but R is true.

131 State true or false

Insect parasitizing fungus is

a. Entomogenous fungus
b. Nematophagous fungus
c. Mycoparasitic fungus
d. Mycoviruses

a) Only a | b) a and b | c) a and c | d) only d

132 State true or false

Club root of crucifers enters the host through

a. Stomata
b. Root hairs
c. Lenticels
d. Wounds

a) a and b | b) only b | c) b and c | d) only d

133 Proteinaceous toxin produced by bacteria to inhibit the growth of similar/ closely related bacterial strain is

a) Bacteriocin | b) Saponins | c) Siderophores | d) Bulbiformin

134 The chemical used for cleaning glassware is

a) Formalin | b) Mercuric chloride | c) Potassium dichromate | d) Sodium chloride

135 Complete resistance against pathogen is provided by

a) Multigene | b) Qualitative gene | c) Quantitative gene | d) Race-non specific gene

136 Generally, true resistance is controlled by the genes located in

a) Nucleus | b) Chloroplast | c) Mitochondria | d) All of the above

137 The type of secretion system present in almost all plant pathogenic bacteria is

a) Type I | b) Type II | c) Type III | d) Type IV

138 The enzyme playing most important role in bacterial pathogenesis is

a) Cellulases b) Proteases c) Pectinases d) Xylanases

139 The pathogen known as "store house of antibiotics" is

a) *Trichoderma* spp. b) *Agrobacterium* spp. c) *Pseudomonas* spp. d) Streptomyces

140 Which of the following micro-organism is not harmful to plants?

*a) Rhizoctonia b) Rhizopus c) Rhizobium d) Ralstonia*

141 Akiochi disease is due to

a) Sulphur toxicity b) Aluminium toxicity c) Copper toxicity d) Iron toxicity

142 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

A) Green Ear of bajra belong to Oomycota phylum

R) Zoospores are the sexual spores of green ear fungi

a)Both A and R are true and R is the correct explanation of A**.** b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.

143 There are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the codes provided below

A) Gene pyramiding aims at assembling multiple desirable genes from multiple parents into single genotype

R) All the major genes are incorporated in a single cultivar that provides protection against several races of a pathogen

a)Both A and R are true and R is the correct explanation of A**.** b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.

144 Match the pairs

| | | |
|---|---|---|
| *A.* | *Reovirus* | I. Respiratory enteric orphan virus |
| *B.* | *Illarvirus* | II. Fungus transmitting rod shaped viruses |
| *C.* | *Furoviruses* | III. Nematode transmitted polyhedral virus |
| *D.* | *Nepovirus* | IV. Isometric labile ring spot viruses |

a) A-I, B-III, C-II, D-IV b) A-IV, B-I, C-II, D-III c) A-II, B-I, C-III, D-IV d) A-I, B-IV, C-II, D-III

145 The method involved the transfer of micro-organism from soil to culture medium with an aim to obtain pure culture is

a) Serial dilution plate method b) Soil washing c) Pour plate technique d) Streak plate method

146 Chemical used for negative staining in ISEM

a) Uranyl acetate b) Safranin c) Lactophenol blue d) Nigrosain

147 High volume sprayer can spray how much quantity of liquid per unit area?
a) > 400 litres/ ha b) 5-400 litres/ ha c) 5-50 litres/ ha d) 1-10 litres/ ha

148 The fluorescence producing dye is known as
a) Chromophore b) Flurochrome c) Luminance d) All of the above

149 Ear showing honey dew symptoms is a characteristic of which disease?
a) Green ear of Bajra b) Grain smut of Bajra c) Ergot of Bajra d) All of the above

150 Dispersal of plant pathogens by wind is called
a) Hydrochory b) Zoochory c) Anemochory d) Ornithochory

**Answer Keys**

| | |
|---|---|
| 51 | **B** |
| 52 | **B** |
| 53 | **C** |
| 54 | **B** |
| 55 | **D** |
| 56 | **B** |
| 57 | **D** |
| 58 | **D** |
| 59 | **A** |
| 60 | **C** |
| 61 | **A** |
| 62 | **A** |
| 63 | **B** |
| 64 | **B** |
| 65 | **C** |
| 66 | **C** |
| 67 | **B** |
| 68 | **A** |
| 69 | **D** |
| 70 | **D** |
| 71 | **D** |
| 72 | **C** |
| 73 | **C** |
| 74 | **D** |
| 75 | **D** |
| 76 | **D** |
| 77 | **D** |
| 78 | **A** |
| 79 | **A** |
| 80 | **B** |
| 81 | **C** |
| 82 | **B** |
| 83 | **C** |
| 84 | **D** |
| 85 | **A** |
| 86 | **C** |
| 87 | **C** |
| 88 | **C** |
| 89 | **C** |
| 90 | **B** |
| 91 | **A** |
| 92 | **B** |
| 93 | **D** |
| 94 | **B** |
| 95 | **A** |
| 96 | **C** |
| 97 | **B** |
| 98 | **B** |
| 99 | **B** |
| 100 | **B** |
| 101 | **A** |
| 102 | **C** |
| 103 | **C** |
| 104 | **C** |
| 105 | **C** |
| 106 | **C** |
| 107 | **B** |
| 108 | **B** |
| 109 | **A** |
| 110 | **B** |
| 111 | **A** |
| 112 | **B** |
| 113 | **A** |
| 114 | **A** |
| 115 | **D** |
| 116 | **A** |
| 117 | **B** |
| 118 | **C** |
| 119 | **D** |
| 120 | **A** |
| 121 | **D** |
| 122 | **A** |
| 123 | **B** |
| 124 | **B** |
| 125 | **A** |
| 126 | **B** |
| 127 | **D** |
| 128 | **A** |
| 129 | **A** |
| 130 | **A** |
| 131 | **A** |
| 132 | **B** |
| 133 | **A** |
| 134 | **C** |
| 135 | **B** |
| 136 | **A** |
| 137 | **A** |
| 138 | **C** |
| 139 | **D** |
| 140 | **C** |
| 141 | **A** |
| 142 | **C** |
| 143 | **A** |
| 144 | **D** |
| 145 | **A** |
| 146 | **A** |
| 147 | **A** |
| 148 | **B** |
| 149 | **C** |
| 150 | **C** |