निर्देशनों के लिए निर्देश

1. सभी प्रश्नों के लिए इंग्रजी।
2. सभी प्रश्नों के लिए भाषा सामान्य है।
3. प्रत्येक प्रश्न का केन्द्र ही इंग्रजी।
4. एक से अधिक पत्र देने की अनुमति नहीं है। यदि प्रश्न के लिए गलत माना जाता है।
5. प्रत्येक प्रश्न के लिए स्कोर औसत रेटिंग और एक ही पत्र देने की अनुमति नहीं है। यदि प्रश्न के लिए गलत माना जाता है।
6. OMR उपर पत्र इस परिक्षा पूर्तिका के अन्दर रखा है। पत्र आपने परिक्षा पूर्तिका का रंग नहीं बदल सकता है।
7. OMR पत्र पूरा करने के लिए प्रश्न का 1/3 भाग करता जाएगा। लगते हैं।
8. सभी प्रश्नों के लिए भाषा सामान्य है। यदि किसी प्रश्न का सही उत्तर नहीं मिलता है।
9. फूलया अपना रोल नम्बर ओ.एम.एच के पत्र से सामान्यतः सामान्य है।
10. यदि किसी पत्र उपर से कोई पत्र नहीं मिलता है। उसके रोल नम्बर में कोई देखा जाता है।

समय: 2.00 घंटे
Time: 2.00 Hours
Maximum Marks: 100

INSTRUCTIONS FOR CANDIDATES

1. Answer all questions.
2. All questions carry equal marks.
3. Only one answer is to be given for each question.
4. If more than one answers are marked, it would be treated as wrong answer.
5. Each question has four alternative responses marked serially as 1, 2, 3, 4. You have to darken only one circle or bubble indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.
6. The OMR Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully with blue ball point pen only.
7. 1/3 part of the mark(s) of each question will be deducted for each wrong answer. A wrong answer means an incorrect answer or more than one answers for any question. Leaving all the relevant circles or bubbles of any question blank will not be considered as wrong answer.
8. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.
9. Please correctly fill your Roll Number in O.M.R. Sheet. 5 Marks can be deducted for filling wrong or incomplete Roll Number.
10. If there is any sort of ambiguity/mistake either of printing or factual nature then out of Hindi and English Version of the question, the English Version will be treated as standard.

Warning: If a candidate is found copying or if any unauthorized material is found in his/her possession, P.I.R. would be lodged against him/her in the Police Station and he/she would liable to be prosecuted. Department may also debar him/her permanently from all future examinations.

Do not open this Test Booklet until you are asked to do so.
1. Hyperplasia refers to
   (1) Cell death
   (2) Cell enlargement
   (3) Increased cell division
   (4) Decreased cell division

2. Dictyospore is a spore having
   (1) only horizontal septa
   (2) only vertical septa
   (3) both horizontal and vertical septa
   (4) No septa

3. Which one of the following fungi formed anastomosis group?
   (1) *Sclerotinia* spp.
   (2) *Rhizotonia* spp.
   (3) *Fusarium* spp.
   (4) *Trichoderma* spp.

4. Which nutrient is supplied by mycorrhiza to the host plant?
   (1) Iron
   (2) Phosphorus
   (3) Sulphur
   (4) Nitrogen
5. प्लेमोफॉम चर्चितर जीव में इनके ऊपर नहीं दिखा गया?

6. प्लेमोफॉम चर्चितर जीव में इनके ऊपर नहीं दिखा गया?

7. Ti plasmid is present in
   (1) Agrobacterium tumefaciens
   (2) Xanthomonas campestris pv. citri
   (3) Xanthomonas axonopodis pv. citri
   (4) Pseudomonas solanacearum

8. Bacteria that produce yellow pigment in the growth medium is
   (1) Xanthomonas campestris pv. citri
   (2) Agrobacterium tumefaciens
   (3) Xanthomonas axonopodis pv. citri
   (4) Pseudomonas solanacearum

3. (Plant Pathology)
9. An example of plant disease that is caused by Gram positive bacterium is
   (1) Black rot of crucifers
   (2) Peach leaf curl
   (3) Brown rot of potato
   (4) Stem and fruit canker of tomato

10. A bacteria which have flagella all over the cell is categorized in
    (1) Amphitrichous (2) Atrichous
    (3) Lophotrichous (4) Peritrichous

11. In nomenclature of bacteria, the pathovar system was introduced by
    (1) D.W. Dye (2) M.P. Starr
    (3) M.J. Davis (4) M.S. Mount

12. Genus of virus containing dsDNA is
    (1) Gemini virus (2) Tobra virus
    (3) Poty virus (4) Caulimo-virus

13. W.M. Stanley got Nobel prize for
    (1) Baculoviruses
    (2) Mycoviruses
    (3) Sedimentation of TMV
    (4) Crystallization of TMV
14. Coconut Cadang-Cadang disease is caused by
(1) Viroid
(2) Virus
(3) Phytoplasma
(4) L-form bacteria

15. Infectious protein particles are called
(1) Viroids
(2) Phages
(3) Prions
(4) Oncogenic viruses

16. Stylet-Borne Virus is
(1) Non-persistent
(2) Persistent
(3) Propagative
(4) Circulative

17. Plant viruses crosses infected to uninfected cells through a channel known as
(1) Plasmodesmata
(2) Cell membrane
(3) Nuclear membrane
(4) Endoplasmic reticulum
18. Rice Tungro virus has two types of viral particles they are known as
   (1) Bacilli form and spherical
   (2) Both Bacilli form
   (3) Both spherical
   (4) Both isometric

19. Virus capsids are made from structural molecules called
   (1) Envelops
   (2) Capsomeres
   (3) Prophage
   (4) Spikes

20. "Solar energy treatment" for loose smut of wheat disease was given by
   (1) R.S. Vasudeva
   (2) J.C. Luthra and Sattar
   (3) R.N. Tandon
   (4) D. Suryanarayana

21. Which one of the following fungicides is non-systemic in nature?
   (1) Captan
   (2) Thiram
   (3) Carbendazim
   (4) Mencozeb

22. The "gene for gene" hypothesis was discovered by Harold Henry while working with rust of _____.
   (1) Soyabean
   (2) Lentil
   (3) Flax
   (4) Wheat

03 (Plant Pathology)
23. Domestic quarantine imposed in India for
   (1) Potato scab
   (2) Potato wart
   (3) Potato late blight
   (4) Potato virus X

24. One of the important ingredients of Burgundy mixture is
   (1) Sodium Carbonate
   (2) Calcium Hydroxide
   (3) Sodium Chloride
   (4) Ammonium Carbonate

25. A fungal biological agent used against soil borne fungal diseases is
   (1) Fusarium solani
   (2) Bacillus subtilis
   (3) Penicillium spp.
   (4) Trichoderma spp.

26. Sulphur fungicides are very effective in the control of
   (1) Wilts
   (2) Downy mildews
   (3) Anthracnose
   (4) Powdery mildews

27. 250 PPM solution means
   (1) 2.5 g/lit
   (2) 250 g/lit
   (3) 25 mg/lit
   (4) 250 mg/lit
28. Streptomycin antibiotic is produced by
(1) *Streptomyces griseochromogens*
(2) *Streptomyces kesugaensis*
(3) *Penicillium griseofulvum*
(4) *Streptomyces griseus*

29. Benimidazole fungicide interfere with:
(1) Chitin synthesis
(2) Nuclear division
(3) Mitochondrial respiration
(4) Electron transport

30. The upward movement of any fungicide in plant system is known as
(1) Passive movement
(2) Apoplastic movement
(3) Symplastic movement
(4) Acropetal movement

31. One of the following fungicides is also known as Kittleson’s killer
(1) Dinocap     (2) Captan
(3) Bayton     (4) Carbendazim
32. Flag smut of wheat was introduced in India from
   (1) Sri Lanka      (2) Australia
   (3) England        (4) The Netherlands

33. The Pathogen *Plasmopara viticola* is related with discovering of
   (1) Bordeaux mixture
   (2) Bordeaux paint
   (3) Soda Bordeaux mixture
   (4) Bordeaux paste

34. Streptomycin was the first antibiotic used in plant disease control. It was used against
   (1) Fire blight of Pear
   (2) Citrus canker
   (3) Bacterial blight of cotton
   (4) Soft rot of potato

35. Soyabean rust is caused by
    (1) *Phakopsora pachyrhizi*
    (2) *Uromyces appendiculatus*
    (3) *Puccinia coronata*
    (4) *Hemileia vastatrix*

36. A rice disease caused by *Thanetophorus cucumeris* is known as
    (1) Sheath rot      (2) Sheath blight
    (3) Root rot        (4) Foot rot
37. भूत-IV के अनुक्रम में नीचे दिए गये रूपान्तरक के सही चरणों का चयन करें:
   (1) (0) एसियम (I) पिञ्डयम (II) बेसिडियम (III) टेलियम (IV) बुर्हिडियम
   (2) (0) पिञ्डयम (I) एसियम (II) बुर्हिडियम (III) टेलियम (IV) बेसिडियम
   (3) (0) एसियम (I) बुर्हिडियम (II) पिञ्डयम (III) टेलियम (IV) बेसिडियम
   (4) (0) बेसिडियम (I) एसियम (II) बुर्हिडियम (III) पिञ्डयम (IV) टेलियम

38. नींबू के कैंकर का रोगजनक का स्रोत है
   (1) जीवाणु बीड़ों द्वारा फैलता है।
   (2) संक्रमित रहितों एवं पेड़ पर लगे पुनर्न जाखमों द्वारा।
   (3) संक्रमित भौतिक के अवकाशों में उपस्थित जीवाणुओं द्वारा।
   (4) एकल उपजों द्वारा।

39. नमक में से एक पूर्ण मूल परजीवी है
   (1) अमरेल (2) बौद्धा
   (3) गंधवा (4) गुधरी

40. तुड़ाई के परचाम सबसे प्रभावी कवकनाशी का प्रयोग अस्तत्व करते हुए यह सिंहासन जाता है
   (1) थायाबांडाजोल (2) थाइम्यम
   (3) थेकोज़ेब (4) जाइरम
41. Smut of onion is
   (1) Seed borne.
   (2) Seed borne and bulb borne.
   (3) Seed borne, bulb borne and soil borne.
   (4) Seed borne, bulb borne, soil borne and air borne.

42. Bacterial leaf spot of pomegranate is caused by
   (1) Xanthomonas axanopodis pv. punicae
   (2) Xanthomonas campestris pv. translucens
   (3) Xanthomonas arboricola pv. pruni
   (4) Xanthomonas campestris pv. pruni

43. Leaf curl of tomato is transmitted through
   (1) White fly (2) Jassid
   (3) Aphid (4) Mite

44. Stem gall of coriander is caused by
   (1) Protomyces macrosporus
   (2) Magnaporthe grisea
   (3) Rhizoctonia solani
   (4) Fusarium sambucinum

45. Little leaf of brinjal is caused by
   (1) Mycoplasma like organism
   (2) Fungi
   (3) Bacteria
   (4) Viruses
46. In Rajasthan downey mildew of pearl millet is important disease. The most suitable disease management is done by using
   (1) only seed treatment.
   (2) only foliar spray of chemical.
   (3) summer ploughing + seed treatment + foliar spray.
   (4) summer ploughing + seed treatment + resistant varieties.

47. Whiptail of cauliflower is caused due to the deficiency of:
   (1) Boron deficiency
   (2) Zinc deficiency
   (3) Molybdenum deficiency
   (4) Iron deficiency

48. The seed borne nematode is
   (1) Heterodera
   (2) Anguina
   (3) Meloidogyne
   (4) Pratylenchus

49. Sesamum phylloid is caused by
   (1) Virus
   (2) Bacterium
   (3) L-form bacteria (4) Phytoplasma

50. Which juvenile stage of root knot nematode attacks to plant?
   (1) First stage juvenile
   (2) Second stage juvenile
   (3) Third stage juvenile
   (4) Fourth stage juvenile
51. Grain smut of sorghum is caused by
   (1) Sphaeclothetaea cruenta
   (2) Sphaeclothetaea reiliana
   (3) Sphaeclothetaea sorghi
   (4) Tolyposporium ehrenbergii

52. Differential resistance is also called as
   (1) Horizontal resistance
   (2) Vertical resistance
   (3) Biochemical resistance
   (4) Cytoplasmic resistance

53. Which of the following statement is not correct?
   (1) Tab toxin is produced by - Rhizoctonia solani.
   (2) Victorin is produced by - Cochliobolus victoriae.
   (3) Tab toxin is produced by - Alternaria alternata.
   (4) Phaseolotoxin is produced by - Pseudomonas syringae pv.Phaseolicola.

54. Puccinia hordei produce enzymes that can degrade:
   (1) Cuticular wax
   (2) Peptic substances
   (3) Cellulose
   (4) Hemi cellulose
55. Aflatoxins are most carcinogenic toxins which are produced by
(1) Neurospora crassa
(2) Fusarium avenaceum
(3) Rhizoctonia bataticola
(4) Aspergillus flavus

56. Rishitin, Pisatin and Phaseollin are example of
(1) Phytotoxin
(2) Phytoalexins
(3) Phytoanticipins
(4) Pathotoxins

57. Match the following:

(A) Hm-1   (a) Resistance gene of rice
(B) Cf-9   (b) Resistance gene of flax
(C) L6     (c) Resistance gene of maize
(D) Xa21   (d) Resistance gene of tomato

Codes:

(A) (B) (C) (D)
(1) (c) (d) (b) (a)
(2) (a) (b) (d) (c)
(3) (b) (c) (d) (a)
(4) (d) (a) (c) (b)
58. आलूओं का कृष्णान्त: रोग का अजीविक कारक है
(1) अधिक आर्द्रता
(2) निम्न एक्सीजन संभारण एवं उच्च तापक्रम
(3) उच्च बंधरण तापमान
(4) निम्न तापक्रम

59. निम्न में से एक कवक क्षारोद एक्टालोइड उत्पन्न करता है
(1) एपिफाइड साइजर
(2) क्लेवेसिएस पुर्पुरिया
(3) राइजोपस्ट स्टोलोनीफर
(4) स्क्लेलोडियम रोल्फसिटी

60. कवक को अभिमंडित किया जा सकता है
(1) सैफरानिन
(2) लैक्टोफिनाल काटन ब्लू
(3) स्लेइसरन
(4) मेलाडाईट ग्रीन

61. ऊज परीक्षण किसके लिए किया जाता है?
(1) कवक रोगजनक
(2) जीवाणु रोगजनक
(3) विषाणु रोगजनक
(4) फाइटोफालोजमा रोगजनक

03 (Plant Pathology)
62. Autoclave sterilization is done at 121 °C for 15 minutes at a pressure of
(1) 10 p.s.i
(2) 15 p.s.i
(3) 20 p.s.i
(4) 25 p.s.i

63. Standard blotter test is used in
(1) Seed health testing
(2) Seed purity test
(3) Seed rate
(4) Seed viability

64. The size of fungal spores is measured by which technique?
(1) Pathometry
(2) Turbidometry
(3) Micrometry
(4) Microtomy

65. In agarose gel electrophoresis, DNA will migrate towards
(1) Cathode or positive electrode
(2) Anode or negative electrode
(3) Cathode or negative electrode
(4) Anode or positive electrode
66. The simplest technique for isolating bacteria in growth media is referred to as
   (1) Serial dilution method
   (2) MPN method
   (3) Streak plate method
   (4) Pour plate method

67. Plant virus particles can be seen under
   (1) Light microscope
   (2) Compound microscope
   (3) Electron microscope
   (4) Fluorescence microscope

68. “Indian type culture collection” (ITCC) centre is located at
   (1) Pune
   (2) Chandigarh
   (3) Dehradun
   (4) New Delhi

69. A solidifying agent Agar-Agar is obtained from
   (1) Red algae
   (2) Green algae
   (3) Blue green algae
   (4) Brown algae

70. Contribution on the epidemiology of disease cycle of stem rust of wheat was made by
   (1) K.C. Mehta
   (2) M.M. Payak
   (3) B.B. Mundkur
   (4) S. Nagarajan
71. The first computer simulation programme for plant disease forecasting was
(1) EPIVEN  (2) EPIDEM
(3) TOMCAST  (4) BLIGHTCAST

72. Covered smut of barley is an example of
(1) Monocyclic  (2) Polycyclic
(3) Homocyclic  (4) Non-cyclic

73. The optimum temperature range for the disease development of stem and foot rot of papaya is
(1) 18-22 °C  (2) 5-10 °C
(3) 10-20 °C  (4) 28-30 °C

74. In case of loose smut of wheat, assessment of losses is done at which crop stage?
(1) Ripening stage  (2) Heading stage
(3) Flowering stage  (4) Dough stage

75. The number of plant units infected in a population is known as
(1) Disease severity  (2) Disease intensity
(3) Disease index  (4) Disease incidence
76. The disease spread suddenly in a large area for short time is known as
(1) Pandemic disease
(2) Sporadic disease
(3) Epidemic disease
(4) Endemic disease

77. A book “Plant Disease : Epidemics and control” was written by
(1) R.S. Singh
(2) B.M. Cook
(3) G.N. Agrios
(4) J.E. Vanderplank

78. The mushroom Volvariella sp. is also known as
(1) Paddy straw mushroom
(2) Button mushroom
(3) Oyster mushroom
(4) Milky mushroom

79. The fruiting body of a mushroom is called
(1) Sorocarp
(2) Basidiocarp
(3) Ascoecarp
(4) Plasmodiocarp

80. Which of the following is a poisonous mushroom?
(1) Agaricus bisporus
(2) Volvariella volvacea
(3) Pleurotus eryngii
(4) Amanita phalloides
81. In Ancient India a book “Vraksha Ayurveda” was written by
(1) Surpal        (2) Charak
(3) Vagbhata      (4) Sushruta

82. The first Indian Scientist worked on fungi was
(1) K.R. Kirtikar (2) E.J. Butler
(3) B.B. Mundkur  (4) J.F. Dastur

83. The most devastative air pollutant to plant is
(1) Nitrogen dioxide (2) Sulphur dioxide
(3) Ethylene         (4) Ozone

84. Crown gall of stone fruits can be controlled by using
(1) Trichoderma    (2) Strain K-84 of Agrobacterium radiobacter
(3) Ampelomyces quisqualis (4) Bacillus subtilis

85. A journal “Journal of Mycology and Plant Pathology” is published from
(1) New Delhi      (2) Jodhpur
(3) Udaipur        (4) Jaipur

81. प्राचीन भारत में एक पुस्तक ‘वृक्ष आयुर्वेद’ किसके द्वारा लिखी गई थी?
(1) सूरपाल     (2) चरक
(3) वागभट्ट     (4) सुश्रुत

82. प्रथम भारतीय वैज्ञानिक जिसने कब्जों पर अध्ययन किया?
(1) क. आर. कीर्तिकर (2) ई.जे. बटलर
(3) बी.बी. मुंडकर      (4) जे.एफ. दस्तूर

83. पौधों के लिए सबसे निमन्नकारी बादू प्रदूषक है?
(1) नाइट्रोजन डाइऑक्साइड (2) सल्फर डाइऑक्साइड
(3) इथेनाइजन       (4) ऑजन

84. गुड़ली वाले फलों का क्रांतगाल रोग निम्न को अपनाकर नियंत्रित किया जा सकता है?
(1) ट्राइकोडियम (2) एनज़ीबीटीएसम रेडीजोबक्टर का K-84 उपरोक्त
(3) एंपेलोमाइक्रोबियल मीफ़िलिकस (4) बेलिसम सब्स्टेलस

85. एक जर्नल “जर्नल ऑफ मायकोलॉजी एण्ड प्लांट पेयभोलॉजी” कहाँ से प्रकाशित किया जाता है?
(1) नई दिल्ली     (2) जोधपुर
(3) उदयपुर      (4) जयपुर
86. क्रॉस प्रोटेक्शन का उपयोग किन बीमारियों की रोकथाम में किया जाता है?

(1) विषाणु रोगों
(2) जीवाणु रोगों
(3) कक्षा रोगों
(4) फाइटोप्लाज्माल रोगों

86. Cross-protection is used against diseases caused by:

(1) Viral diseases
(2) Bacterial diseases
(3) Fungal diseases
(4) Phytoplasmal diseases

87. भारत में बंगाल के अकाल का महत्वपूर्ण कारण में से एक था:

(1) गेहूं का रुधारा
(2) आलू की पच्ची अंगारी
(3) चावल का हेलमेन्थोस्पोरियम
(4) चावल की आच्छाद अंगारी

87. One of the following important reasons of Bengal famine was:

(1) Rust of wheat
(2) Late blight of Potato
(3) Helminthosporium disease of rice
(4) Sheath blight of rice

88. इंडियन फाइटोप्थालॉजिकल सोसाइटी की स्थापना किसने की थी?

(1) इ.जे. बर्टलर
(2) टी.एस. सदाशिवन
(3) बी.बी. मुंडकर
(4) आर. प्रसाद

88. The Indian Phytopathological society was established by:

(1) E.J. Butler
(2) T.S. Sadasivan
(3) B.B. Mundkur
(4) R. Prasada

89. दौधया मस्ती पत पाया जाता है?

(1) एक्सोमाइजिटिज़
(2) बेसिडियोमाइजिटिज़
(3) ड्यूटेरोमाइजिटिज़
(4) जाइगोमाइजिटिज़

89. Dolipore septum is found in:

(1) Ascomycetes
(2) Basidiomycetes
(3) Deuteromycetes
(4) Zygomycetes
90. One of the following is a heteroecous fungus:
(1) Albugo candida
(2) Phytophthora infestans
(3) Puccinia graminis var. tritici
(4) Ustilago nuda tritici

91. “Perfect Stage” of a fungus means
(1) when it reproduces asexually.
(2) when the fungus is perfectly healthy.
(3) when the fungus produces spores.
(4) when it forms sexual spores.

92. The model fungus which is used in genetic study is
(1) Penicillium (2) Rhizopus
(3) Neurospora (4) Aspergillus

93. The thallus that is converted into reproduction structure is known as
(1) Holocarpic
(2) Monocious
(3) Dioecious
(4) Eucarpic

94. Fungi causing downy mildew diseases are differentiated on the basis of
(1) Sporangióphores character and germination of sporangia.
(2) Conidia characters.
(3) Teliospore characters.
(4) Appendages attached to the cleistothecia.
95. Which one of the following fungus is a single celled?
   (1) Aspergillus  (2) Yeast
   (3) Fusarium     (4) Penicillium

96. Genus fusarium belongs to family
   (1) Tuberculariaceae  (2) Dematiaceae
   (3) Moniliaceae       (4) Melanconiaecae

97. Synnema formation is a common feature of
   (1) Imperfect fungi  (2) Ascomycetes
   (3) Basidiomycetes   (4) Phycomycetes

98. VAM stands for
   (1) Vellicular And Mycorrhiza  (2) Vesicular Arbuscular Mycelium
   (3) Veiniclar and Arbuscular Mycoflora (4) Vesicular Arbuscular Mycorrhiza

99. Parasexuality was first discovered by
   (1) Erikson     (2) de Bary
   (3) Pontecarvo  (4) Robert Koch

100. The fruiting body of Colletotrichum capsici is
     (1) Acervulus       (2) Perithecium
     (3) Pycnidia        (4) Sporodochium