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en)

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

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, che t
it contains all the pages in correct sequence and that no pa y
Question Booklet bring it to the notice of the Superintende a
fresh Question Booklet.

2. Do not bring any loose paper, written or blank, inside the E *i*
without its envelope.

3. A separate Answer Sheet is given. *It should not be folded or* *u*
not be provided. Only the Answer Sheet will be evaluated.

4. Write your *Roll Number and Serial Number of the Answer Sh* .

5. **On the front page of the Answer Sheet, write by pen you I**
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 also Roll No. and OMR Sheet No. on the Question Booklet.

7. Any change in the aforesaid entries is to be verified by the invigilator, otherwise it will be taken as unfair means.

8. Each question in this Booklet is followed by four alternative answers. *For each question, 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 ball-point pen as mentioned in the guidelines given on the first page of the Answer Sheet.

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 mark).

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 *only the OMR Answer Sheet* 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.

[उपर्युक्त निर्देश हिन्दी में अन्तिम आवरण-पृष्ठ पर दिये गए हैं]

[No. of Printed Pages : 28+2

No. of Questions/प्रश्नों की संख्य

Time/समय : 2 Hours/घण्टे

Note : (1) Attempt as many questions as you can. **One** mark will be deducted for each inco awarded for each unattempted questior

अधिकाधिक प्रश्नों को हल करने का प्रयत्न करें। प्रत्येक प्रश्न **3** अंक का है। प्रत्येक गलत उत्तर के लिए एक अंक काटा जाएगा। प्रत्येक अनुत्तरित प्रश्न का प्राप्तांक शून्य होगा।

(2) If more than one alternative answers seem to be approximate to the correct answer, choose the closest one.

यदि एकाधिक वैकल्पिक उत्तर सही उत्तर के निकट प्रतीत हों, तो निकटतम सही उत्तर दें।

1. Which of the following pigments occur in blue green algae?

(1) Fucoxanthin (2) Violaxanthin

(3) Phycocyanin (4) Phycoerythrin

2. A protein rich organism is

(1) *Spirulina/ Nostoc* (2) *Chlamydomonas*

(3) *Spirogyra/ Ulothrix* (4) *Oedogonium*

3. Oil is the reserve food in

(1) *Chlamydomonas* (2)

(3) *Vaucheria* (4)

4. Carrageenin, a jelly-like substance, is ob d

(1) *Sargassum* (2) *Fucus* (3)

5. Gulf weed is

(1) *Chlamydomonas* (2) *Fucus*

(3) *Sargassum* (4) *Batrachospermum*

6. *Chlamydomonas* shows

(1) isogamy (2) anisogamy

(3) oogamy (4) isogamy, anisogamy and oogamy

7. A ring of multiciliate zoogonidium is found in

(1) *Ulothrix* (2) *Zygnema* (3) *Oedogonium* (4) *Chara*

8. In which one of the following genera, sporangium contains capillitium?

(1) *Absidia* (2) *Entomophthora*

(3) *Stemonites* (4) *Mortierella*

9. Rice crop was destroyed by a fungus which resulted in severe famine of Bengal in 1942-1943. It was due to

(1) *Penicillium* (2) *Helmint*

(3) *Rhizopus* (4) *Puccinic*

10. VAM represents

(1) saprophytic fungi (2) symbiot

(3) saprophytic bacteria (4) symbiot

11. Which one of the following is used in making of the bread?

(1) *Saccharomyces cerevisiae* (2) *Saccharomyces ludwigii*

(3) *Saccharomyces octosporus* (4) All of the above

12. White rust disease is caused by

(1) *Ascobolus* (2) *Rhizopus* (3) *Albugo* (4) *Puccinia*

13. The fungus without mycelium is

(1) *Puccinia* (2) *Phytophthora*

(3) *Rhizopus* (4) *Saccharomyces*

14. The respiratory process of yeast is

(1) rarely anaerobic (2) anaerobic

(3) purely aerobic (4) both aerobic and anaerobic

15. Exclusion of plant diseases by legislation is known as

(1) biological control (2) p

(3) disease resistance (4) c

16. Juvenile state of Moss is

(1) protonema (2) prothallus (3) c ive

17. A sterile jacket around gametangia is a feature of

(1) algae (2) bryophytes (3) lichens (4) fungi

18. Which one is true moss?

(1) Bog moss (2) Reindeer moss

(3) Club moss (4) Irish moss

19. The protective device over the developing sporophyte is shoot-calyptra in

(1) *Frullania* (2) *Anthoceros* (3) *Sphagnum* (4) *Pellia*

20. An archegonium of *Riccia* has

(1) 4 neck canal cells, 1 venter canal cell and one oosphere

(2) 4 neck canal cells, 2 venter canal cells and one oosphere

(3) 4 neck canal cells, 1 venter canal cell and two oospheres

(4) 6 neck canal cells, 2 venter canal cells and one oosphere

21. Alternation of generation in *Polysiphonia* is

(1) haplobiontic and monophasic (2) hap

(3) diplobiontic and diphasic (4) dipl

22. Which one of the following is a gymnostomous moss?

(1) *Funaria* (2) *Pogonatum* (3) *Sphagnum* (4) *Polytrichum*

23. Function of elaters and pseudoelaters is

(1) conduction of sap (2) protection of spores

(3) absorption of nutrients (4) spore dispersal

24. If a sporangium develops from a group of cells it is called

(1) Leptosporangiate (2) Eusporangiate

(3) Heterosporangiate (4) None of these

25. Basal swollen part of ligule of *Selaginella* is

(1) Protonema (2) Hydathodes

(3) Rhizopodium (4) Glossopodium

26. Total number of series in Bentham and Hooker system of classification is

(1) 19 (2) 21 (3) 24

27. Branched stamens are found in

(1) *Euphorbia* (2) *Solanum* (3) *Parth*

28. Bisporic type of embryosac development takes

(1) *Allium* (2) *Oenothera* (3) *Fritill...*

29. Floral buds are modified into tendril in

(1) *Pisum* (2) *Polygonum* (3) *Antigonon* (4) *Cucurbits*

30. *Cycas* ovule is

(1) anatropous (2) circinotropous

(3) hemianatropous (4) orthotropous

31. *Pinus* wood is

(1) pycnoxylic (2) manoxylic (3) porous (4) diploxylic

32. 'Shower of sulphur' occurs in

(1) *Tectona* forests (2) Pine forests

(3) *Ginkgo* forests (4) *Juniperus* forests

33. Which gymnosperm is medicinally important for treatment of Asthma?

(1) *Taxus* (2) *Ephedra* (3) *Gi*

34. *Pentoxylon* was discovered from

(1) Western Ghats (2) Ar

(3) Rajmahal Hills (4) Ra

35. Coconut fruit is a example of

(1) Drupe (2) Hesperidium (3) Berry (4) Lomentum

36. Parachute mechanism of fruit dispersal is due to

(1) Thorn (2) Pappus (3) Bracts (4) Tepals

37. Gynobasic style is found in

(1) *Solanum* (2) *Ocimum* (3) *Vinca* (4) *Calotropis*

38. Cortical vascular bundles are found in

(1) *Bignonia* (2) *Mirabilis* (3) *Boerhaavia* (4) *Nyctanthes*

39. Perisperm in seeds develops from

(1) nucellus (2) funiculus (3) hilum (4) ovary wall

40. Bicollateral vascular bundles are present in stem of

(1) Cucurbitaceae (2) *Cycas*

(3) *Pinus* (4) Gra

41. Circinotropous ovules are found in

(1) *Opuntia* (2) *Chenopodium* (3) *Poly*

42. Non-medullated stele consisting of a centra phloem is known as

(1) Protostele (2) Solenostele (3) Siphonostele (4) Dictyostele

43. Flowers are zygomorphic in

(1) *Mussaenda* (2) *Ixora* (3) *Hamelia* (4) *Calotropis*

44. The term 'Operational Taxonomic Units' (OTU) is used in

(1) Hutchinson classification

(2) Chemotaxonomy

(3) Numerical taxonomy

(4) Bentham and Hooker classification

45. The 'Lignosae' is used in

(1) Hutchinson classification

(2) Chemotaxonomy

(3) Bentham and Hooker classification

(4) Numerical taxonomy

46. The process by which seedless fruits are produ

(1) Apomixis (2) Parthe

(3) Parthenogenesis (4) Polyem

47. Wood is classified as porous if it contains

(1) vessels (2) trachieds

(3) companion cells (4) sclereids

48. Plant parts used for extraction of opium from *Papaver somniferum* are

(1) young seedlings (2) unripe capsules

(3) mature leaves (4) ripened seeds

49. Rubber is obtained from

(1) cell sap (2) gum (3) resin (4) latex

50. Find out the false statement with regard to family Asteraceae

(1) cypsela fruits (2) hypogynous flowers

(3) inferior ovary (4) zygomorphic flowers

51. LC_{50} is commonly used as the test of

(1) chronic toxicity (2)

(3) margin of safety (4)

52. Asiatic lions in the wild are found in

(1) Gir Forest National Park (2)

(3) Kaziranga National Park (4) Kanha National Park

53. Biomagnification is defined as

(1) the process of accumulation of chemicals in the organisms

(2) the increasing concentration of chemicals at successive trophic levels

(3) accumulation of chemicals in certain species

(4) excessive accumulation of chemicals in primary consumers

54. Which of the following is a first-order consumer?

(1) Dingo (2) Gaur (3) Hyena (4) Dhole

61. Photochemical smog is a mixture of

(1) nitrogen, air, oxygen, hydrocarbon

(2) nitrogen oxides, ozone, peroxy acetyl nitrate, particulates and unreacted hydrocarbons

(3) peroxy acetyl nitrate, particulates, carbon dioxide, unreacted hydrocarbons

(4) air, oxygen, nitrogen, carbon dioxide, peroxy acetyl nitrate, unreacted hydrocarbons

62. Minimata and Itai-itai diseases are caused by

(1) mercury and cadmium (2) iron and silicon

(3) lead and asbestos (4) lead and chromium

63. Biodegradation of oil spills is carried by

(1) *Pseudomonas denitrificans* (2) *Methanomonas*

(3) *Pseudomonas putida* (4) *Acetobacter acetogenum*

64. The National Environment Engineering Research Institute (NEERI) is situated at

(1) Nainital (2) Durgapur (3) Shimla (4) Nagpur

65. "Meeting the needs of the present without compromising the ability of future generation to meet their own needs" defines

(1) sustainable development (2) conservation of biodiversity

(3) convention on biodiversity (4) human resource development

66. Identify the correct combination :

(a) SO_2	(i) Red-brown distal necrosis
(b) NO_x	(ii) Red-brown inter-venial necrosis
(c) HF	(iii) Flecks on upper surface of leaves with distal necrosis
(d) Cl	(iv) Tip and marginal necrosis
(e) Ethylene	(v) Needle-point chlorotic dots with upper surface flecks
(f) O_3	(vi) Abscission and curling

(1) (a)-(ii); (b)-(i); (c)-(iv); (d)-(iii); (e)-(vi); (f)-(v)

(2) (a)-(i); (b)-(ii); (c)-(iv); (d)-(iii); (e)-(v); (f)-(vi)

(3) (a)-(i); (b)-(ii); (c)-(iv); (d)-(iii); (e)-(vi); (f)-(v)

(4) (a)-(i); (b)-(iii); (c)-(iv); (d)-(vi); (e)-(ii); f-(v)

67. About 60% of the total greenhouse forcing is caused by

(1) CO_2 (2) CH_4 (3) CFC (4) ozone

68. The interaction that benefits both the participating species is known as

(1) predation (2) parasitism (3) mutualism (4) commensalism

69. In a tree ecosystem, pyramid of number is

(1) upright (2) intermediate type

(3) inverted (4) upright and inverted

70. Which of the following species is not an indicator of eutrophic condition?

(1) *Anabaena flos-aquae* (2) *Microcystis aeruginosa*

(3) *Aphanizomenon flos-aquae* (4) *Hydrilla*

71. Water bloom is associated with

(1) biomagnification (2) eutrophication

(3) biofortification (4) acid rain

72. Average salinity of ocean is

(1) 3·5 p.p.t. (2) 3·5% (3) 35% (4) 35 p.p.m.

73. The calorific value of bituminous coal is

(1) 11000-14000 (2) 9

(3) 8300-11000 (4) 5

74. Study of interaction among all the living o ty is known as

(1) autecology (2) synecology (3) cynecology (4) autogeny

75. *Vallisneria* is a

(1) halophyte (2) hydrophyte

(3) xerophyte (4) mesophytic fern

76. The antibiotic rifampicin blocks

(1) ATP production (2) DNA replication

(3) transcription (4) translation

77. In an opern, promoter region binds to

(1) repressor (2) inducer

(3) repressor and inducer both (4) RNA polymerase

78. During feedback inhibition

(1) product of the pathway acts on DNA to inhibit enzyme synthesis

(2) product of the pathway inhibits the activity of the first enzyme of the pathway

(3) product of the pathway interacts with substrate to inhibit enzyme activity

(4) substrate of the pathway inhibits the activity of the first enzyme of the pathway

79. The nitrogen-fixing bacterium *Beijerinckia* is a

(1) facultative anaerobe (2) aerob

(3) anaerobe (4) symb

80. *In vitro* how many molecules of ATP are consume

(1) 6 (2) 8 (3) 16 (4) 24

81. Ferredoxin-dependent nitrate reductase is found in

(1) fungi (2) all photosynthetic organisms

(3) cyanobacteria (4) eukaryotes

82. How many electrons are involved in reduction of nitrate to ammonium and its incorporation into amine-nitrogen?

(1) 4 (2) 10 (3) 12 (4) 6

83. Uptake of sulfur into plant roots from the soil is almost exclusively via

(1) SO_4^{2-} (2) SO_3^{2-} (3) S^{2-} (4) GSH

84. The turnover time for ATP in a cell is

(1) 2-3 hours (2) 12-24 hours

(3) 30-60 min (4) 10-45 seconds

85. A reaction can occur spontaneously only if

(1) ΔG is positive

(2) ΔG is negative

(3) ΔG is zero

(4) ΔG content of product is higher than Δ

86. Large K_m denotes for

(1) large dissociation constant (2) small dissociation constant

(3) large association constant (4) high enzyme substrate affinity

87. In which part of the enzyme substrate specificity resides?

(1) Prosthetic part (2) Apoenzyme part

(3) Coenzyme part (4) Organic part of the cofactor

88. Fatty acid biosynthesis does not require

(1) biotin (2) malonyl-CoA (3) acetyl-CoA (4) NADH

89. Which of the following statements is correct?

(1) A low concentration of orthophosphate in the cytosol promotes the synthesis of starch in chloroplast

(2) A low concentration of orthophosphate in the cytosol promotes the synthesis of sucrose in cytosol

(3) An abundance of orthophosphate in the cytosol promotes the synthesis of starch in cytosol

(4) An abundance of orthophosphate in the c of starch in chloroplast

90. 16S ribosomal RNA (or 16S rRNA) is a comp

(1) 30S small subunit (2) 50S

(3) 40S small subunit (4) 60S

91. The conversion of stored fatty acids to sucrose in germinating seeds begins in

(1) mitochondria (2) cytosol

(3) vacuoles (4) glyoxisomes

92. The precursor for the biosynthesis of glutamate family amino acids is

(1) 2-oxoglutarate (2) 3-phosphoglycerate

(3) oxaloacetate (4) pyruvate

93. ATP can be best referred as

(1) a molecule that serves as a storage form of energy

(2) a molecule that serves as an immediate donor of free energy

(3) a molecule that has the highest phosphate group transfer potential

(4) a molecule used as a source of phosphate

94. In which range of the visible spectrum leaves absorb the least amount of light?

(1) Yellow (2) Blue (3) Green (4) Violet

95. Cyt C, a freely soluble protein of the mitochondrial intermembrane space moves between

(1) complex III and IV (2) com

(3) complex I and II (4) NAD

96. Oligomycin inhibits

(1) cytochrome oxidase (2) F_0 s

(3) adenine nucleotide translocase (4) K^+

97. Ribulose bisphosphate carboxylase/oxygenase of higher plants has

(1) eight identical large subunits and eight identical small subunits

(2) eight identical large subunits and six identical small subunits

(3) eight identical large subunits and four dissimilar small subunits

(4) eight identical large subunits and two identical small subunits

98. During C_4 metabolism the first intermediate into which CO_2 is fixed is

(1) malate (2) pyruvate

(3) pyruvate phosphate (4) oxaloacetate

99. During photorespiration glycine is synthesized in

(1) peroxysome (2) mitochondria

(3) chloroplast (4) cytoplasm

100. The most abundant element next to C, H and O is

(1) P (2) N (3) S

101. Green ear disease of 'Bajara' is caused by

(1) *Sclerospora graminicola* (2) *Ei*

(3) *Plasmopara viticola* (4) *Sp*

102. Mycoplasmas were first isolated in pure cu- - - - - -

(1) Safferman and Morris (2) Nocard and Roux

(3) Nowak (4) Antonie van Leeuwenhoek

103. Soft rot disease of sweet potato is caused by

(1) *Rhizopus stolonifer* (2) *Rhizopus sexualis*

(3) *Rhizoctonia solani* (4) *Trichophyton tuberosa*

104. Apple scab disease is caused by

(1) *Taphrina deformans* (2) *Venturia inequalis*

(3) *Xanthomonas* (4) SO_2 pollution

105. Tobacco mosaic virus was first obtained in crystalline form by

(1) D. Iwanowski
(2) F. Twort
(3) W. Stanley
(4) M. Beijerinck

106. The bacteria which grow at high temperature and low pH are known as

(1) acidophiles
(2) halop
(3) thermophiles
(4) therm

107. Plasmid is also called as

(1) chromosome
(2) episo
(3) autosome
(4) heter

108. Ethanol and CO_2 is produced from sugars by

(1) *Lactobacillus*
(2) *Acetobacter*
(3) *Stereptomyces*
(4) *Saccharomyces*

109. Aflatoxin is produced by

(1) *Aspergillus flavus*
(2) *Aspergillus niger*
(3) *Aspergillus terreus*
(4) *Neurospora crassa*

110. The addition of pollutant-acclimated microbes or genetically engineered microbes to a hazardous waste site in order to react with hazardous wastes and render them harmless is known as

(1) bioconversion
(2) bioaugumentation
(3) bioremediation
(4) biodegradation

111. The study of cellular and physiological trait variations that does not involve changes in the underlying DNA sequence is called

(1) metagenomics (2) genomics

(3) epigenetics (4) proteomics

112. An infectious agent consisting of self-replicating protein with no trace of nucleic acids is known as

(1) virions (2) prions (3) vi

113. A substance produced by the host in respon ing it from further viral infection is called

(1) PR proteins (2) p

(3) phytotoxins (4) ir

114. The compounds which do not pre-exist in healthy plants but are synthesised *de novo* in response to infectious agents or products are called

(1) immunoglobulins (2) phytoalexins

(3) phytotoxins (4) interferons

115. The first step of nitrogen fixation is

(1) reduction of nitrogen gas to ammonia

(2) reduction of nitrogen gas to nitrite

(3) reduction of nitrogen gas to nitrate

(4) reduction of nitrogen gas to ammonium nitrate

116. The process of uptake of naked DNA fragment by a cell is termed as

(1) cloning (2) transformation

(3) transduction (4) conjugation

117. Genetic material of TMV is

(1) ssRNA (2) ssDNA (3) dsDN

118. Methanogens can survive

(1) strictly under aerobic condition

(2) strictly under anaerobic condition

(3) both under aerobic and anaerobic conditic

(4) strictly inside a host

119. Organism used for commercial production of citric acid is

(1) *Bacillus* sp. (2) *Acetobactor aceti*

(3) *Aspergillus niger* (4) *Lactobacillus*

120. Cyclosporin —A(CsA) the immunesuppressive agent used in organ transplant cases is produced by

(1) *Monascus purpureus* (2) *Trichoderma polysporum*

(3) *Clostridium* (4) *Staphylococcic*

121. Which of the following fungi was first reported to be involved in transmission of viral diseases?

(1) *Albugo* (2) *Candida* (3) *Olpidium* (4) *Allomyces*

122. Parasexuality in fungi refers to

(1) absence of palsmogamy, karyogamy and meiosis at all

(2) presence of palsmogamy, karyogamy and it

(3) presence of palsmogamy, karyogamy ar nd point

(4) absence of asexual mode of reproductio

123. Tabtoxin also known as wildfire toxin is pr

(1) *Xanthomonas citri* (2) *Pseudomonas syringae*

(3) *Alternaria alternata* (4) *Fusicoccum amygdali*

124. *Thermococcus*, *Methanococcus* and *Methanobacterium* are

(1) archaebacteria having eukaryotic histone homologue

(2) bacteria with cytoskeleton

(3) archaebacteria with negatively supercoiled DNA as in eukaryotes but lacking histones

(4) bacteria with positively coiled DNA, cytoskeleton and mitochondria

125. Group of bacteria which does not possess peptidoglycan is

(1) cyanobacteria (2) archaebacteria

(3) mycoplasma (4) eubacteria

126. Which of the following call organelles does not have double-membraned envelope?

(1) Endoplasmic reticulum (2) Lyso

(3) Nucleus (4) Mito

127. Absolute linkage is known to occur in

(1) male birds (2) fema

(3) male *Drosophila* (4) fema

128. Mendel was a lucky geneticist because

(1) he worked on garden pea

(2) he studied only seven characters

(3) all characters studied by him segregated independently

(4) he was a mathematician

129. During meiosis DNA replicates

(1) once (2) twice (3) thrice (4) four times

130. Besides nucleus, DNA also occurs in

(1) mitochondria (2) mesosomes

(3) dictyosomes (4) lysosomes

131. Compaction factor of DNA achieved by nucleosome sub-structure of chromatin is

(1) 7 fold (2) 10 fold (3) 30 fold (4) 42 fold

132. Which of the following segment of chromatin replicates part?

(1) Euchromatin (2) Constitutive heterochromatin

(3) Facultative heterochromatin (4) Botl

133. Monosomy, in diploids, for all its chromosom

(1) *Vicia faba* (2) *Dat*

(3) *Nicotiana tabacum* (4) *Zea*

134. Homozygosity is attained by

(1) multiple crossing (2) out crossing

(3) selfing (4) somatic hybridization

135. Resistance genes are usually found in

(1) wild plants (2) crop plants

(3) cultivated plants (4) native plants

136. Haploid plants are used for

(1) cytogenetical research (2) mutation research

(3) gametoclonal variation (4) All of the above

137. A cross between a hybrid and its recessive parent is called

(1) back cross
(2) monohybrid cross
(3) test cross
(4) multiple cross

138. When an eukaryotic m-RNA is isolated and then hybridized with the DNA strand from where it has been transcribed, it does not pair uniformly and shows several loops. These loops represent the

(1) replicons
(2) intr
(3) repeated sequences
(4) exo

139. Dicentric bridge and acentric fragment ge e diagnostic features of

(1) tandem duplication
(2) par
(3) pericentric inversion
(4) translocation

140. Which of the following is correctly matched?

(1) Monosomic : $2n+1$
(2) Nullisomic : $2n-1$
(3) Trisomic : $2n+3$
(4) Double monosomic : $2n-1-1$

141. Multiple alleles are present of

(1) same locus in one type of different chromosome pairs
(2) different loci in the same chromosome pair
(3) different loci in different chromosome pairs
(4) same locus in different types of chromosome pairs

142. Which of the following types of crosses is most compatible?

(1) Interspecific (2) Intergeneric (3) Intervarietal (4) Intrageneric

143. Sexual incompatibility can be overcome by

(1) ovule culture (2) protoplast fusion

(3) *in vitro* pollination (4) anth

144. F_2 phenotypic ratio 7 : 1 : 1 : 7 indicates

(1) codominance (2) gene

(3) linkage (4) pleio

145. *XY*-sex determining mechanism was demonstrated in

(1) *Triticum vulgare* (2) *Datura stramonium*

(3) *Cajanus cajan* (4) *Coccinia indica*

146. Which of the following is a mutagen?

(1) Ethyl methane sulphonate (2) Colchicine

(3) Aesculine (4) Actidione

147. The chromosome complement of an organism as seen of pro-metaphase is known as

(1) karyogram (2) karyotype (3) histogram (4) idiogram

148. The number of histone molecules that constitute a nucleosome sub-structure is

(1) one (2) two (3) four (4) eight

149. The process by which gene(s) are transferred from one linkage group to another linkage group is called

(1) inversion (2) translocation

(3) amplification (4) hy

150. The mode of DNA replication is

(1) conservative (2) se

(3) dispersive (4) re

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अभ्यार्थियों के लिए निर्देश

(इस पुस्तिका के प्रथम आवरण-पृष्ठ पर तथा उत्तर-पत्र के दोनों पृष्ठों पर केवल नीली या काली बाल-प्वाइंट पेन से ही लिखें)

1. प्रश्न पुस्तिका मिलने के 10 मिनट के अन्दर ही देख लें कि प्रश्नपत्र में सभी पृष्ठ मौजूद हैं और कोई प्रश्न छूटा नहीं है। पुस्तिका दोषयुक्त पाये जाने पर इसकी सूचना तत्काल कक्ष-निरीक्षक को देकर सम्पूर्ण प्रश्नपत्र की दूसरी पुस्तिका प्राप्त कर लें।

2. परीक्षा भवन में *लिफाफा रहित प्रवेश-पत्र के अतिरिक्त,* लिखा या सादा कोई भी खुला कागज साथ में न लायें।

3. उत्तर-पत्र अलग से दिया गया है। ***इसे न तो मोड़ें और न ही विकृत क*** ***पत्र का ही मूल्यांकन किया जायेगा।*** ...र-

4. अपना *अनुक्रमांक तथा उत्तर-पत्र का क्रमांक प्रथम आवरण-पृष्ठ पर पे*

5. उत्तर-पत्र के प्रथम पृष्ठ पर पेन से अपना अनुक्रमांक निर्धारित स्थान ...दें। जहाँ-जहाँ आवश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक तथा सेट का

6. ओ० एम० आर० पत्र पर अनुक्रमांक संख्या, प्रश्न-पुस्तिका संख्या व ...पर अनुक्रमांक सं० और ओ० एम० आर० पत्र सं० की प्रविष्टियों में उपा

7. उपर्युक्त प्रविष्टियों में कोई भी परिवर्तन कक्ष निरीक्षक द्वारा प्रमाणित होना चाहिये अन्यथा यह एक अनुचित साधन का प्रयोग माना जायेगा।

8. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं। ***प्रत्येक प्रश्न के वैकल्पिक उत्तर के लिये आपको उत्तर-पत्र की सम्बन्धित पंक्ति के सामने दिये गये वृत्त को उत्तर-पत्र के प्रथम पृष्ठ पर दिये गये निर्देशों के अनुसार पेन से गाढ़ा करना है।***

9. प्रत्येक प्रश्न के उत्तर के लिये केवल एक ही वृत्त को गाढ़ा करें। एक से अधिक वृत्तों को गाढ़ा करने पर अथवा एक वृत्त को अपूर्ण भरने पर वह उत्तर गलत माना जायेगा।

10. ध्यान दें कि एक बार स्याही द्वारा अंकित उत्तर बदला नहीं जा सकता है। यदि आप किसी प्रश्न का ***उत्तर नहीं देना चाहते हैं*** तो सम्बन्धित पंक्ति के सामने दिये गये सभी वृत्तों को खाली छोड़ दें। ऐसे प्रश्नों पर शून्य अंक दिये जायेंगे।

11. रफ़ कार्य के लिये प्रश्न-पुस्तिका के मुखपृष्ठ के अन्दर वाले पृष्ठ तथा अंतिम पृष्ठ का प्रयोग करें।

12. परीक्षा के उपरान्त केवल ***ओ०एम०आर० उत्तर-पत्र*** परीक्षा भवन में जमा कर दें।

13. परीक्षा समाप्त होने से पहले परीक्षा भवन से बाहर जाने की अनुमति नहीं होगी।

14. यदि कोई अभ्यर्थी परीक्षा में अनुचित साधनों का प्रयोग करता है, तो वह विश्वविद्यालय द्वारा निर्धारित दंड का/की, भागी होगा/होगी।