

Set No. 1

18P/202/23

Total No. of Printed Pages : 23

Question Booklet No 1159

(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).....

2018

Serial No. of OMR Answer Sheet

Centre Code No.

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.....
(Signature of Invigilator)

Day and Date

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

1. Within 30 minutes of the issue of the Question Booklet, check the Question Booklet to ensure that it contains all the pages in correct sequence and that 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**.
3. **A separate OMR Answer Sheet is given. It should not be folded or mutilated. A second OMR Answer Sheet shall not be provided. Only the OMR Answer Sheet will be evaluated.**
4. Write all entries by blue/black pen in the space provided above.
5. **On the front page of the OMR Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, write the Question Booklet Number, Centre Code Number and the Set Number wherever applicable in appropriate places.**
6. **No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR Answer sheet and Roll No. and OMR Answer 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 pen as mentioned in the guidelines given on the first page of the OMR Answer Sheet.**
9. For each question, darken only one circle on the OMR 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. On completion of the Test, the candidate must handover the OMR Answer Sheet to the Invigilator in the examination room/hall. However, candidates are allowed to take away Test Booklet and copy of OMR Answer Sheet with them.
13. Candidates 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.

ROUGH WORK

रफ़ कार्य

2018

18P/202/23 (1)

No. of Questions : 120

Time : 2 Hours]

[Full Marks : 360

Note : (1) Attempt as many questions as you can. Each question carries 3 (Three) marks. **One mark will be deducted for each incorrect answer.** Zero mark will be awarded for each unattempted question.

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

1. Onion production is related to ———.

(1) Silver revolution

(2) Pink revolution

(3) Blue revolution

(4) Golden revolution

2. Weed index indicates ———.

(1) Herbicide efficiency

(2) Yield reduction

(3) Herbicide activity

(4) Herbicide toxicity

3. Rice plants prefer absorption of N fertilizer in form of ———.

(1) NO_3

(2) NO_2

(3) NH_4

(4) NH_2

4. The term 'soilage' includes

(1) Hay

(2) Silage

(3) Concentrate

(4) Green fodder

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5. The only metallic element present in chlorophyll is ——— .
(1) N (2) Mg (3) K (4) Ca
6. The net assimilation rate is expressed in terms of ——— .
(1) $\text{g cm}^{-2} \text{ day}^{-1}$ (2) $\text{g g}^{-1} \text{ ha}^{-1}$ (3) $\text{g g}^{-1} \text{ day}^{-1}$ (4) $\text{g cm}^{-2} \text{ ha}^{-1}$
7. Nitrate levels in drinking water above ——— mg per litre are considered as a human health hazard.
(1) 5 (2) 10 (3) 15 (4) 20
8. Mustard crop planted at a spacing of 50×20 cm will have ——— plants/ha.
(1) 75,000 (2) 1,00,000 (3) 1,25,000 (4) 1,50,000
9. Which of the following is a method of indirect measurement of soil moisture ?
(1) Neutron moisture meter (2) Electron moisture meter
(3) Positron moisture meter (4) Proton moisture meter
10. The irrigation requirement (IR) is equal to ——— .
(1) $\text{WR} - (\text{ER} - \text{S})$ (2) $\text{WR} - (\text{ER} + \text{S})$
(3) $\text{WR} + (\text{ER} - \text{S})$ (4) $\text{WR} + (\text{ER} + \text{S})$

18P/202/23 (1)

16. Specific gravity of milk on addition of water

- (1) Increases
- (2) Decreases
- (3) Remains unchanged
- (4) Sometime decreases sometime increases

17. Origin of Sahiwal breed of cow is from

- (1) India
- (2) Pakistan
- (3) Sri Lanka
- (4) Vietnam

18. Chief carbohydrate in milk is called

- (1) Glucose
- (2) Lactose
- (3) Maltose
- (4) Sucrose

19. Colostrum is

- (1) First milk drawn after parturition
- (2) Milk of first parturition
- (3) Milk after two weeks of parturition
- (4) Only Buffaloes' milk

20. Temperature for homogenisation of milk

- (1) 30 °C for 30 minutes
- (2) 65 °C for 30 minutes
- (3) 90 °C for 30 minutes
- (4) 110 °C for 30 minutes

21. Iron in milk is

- (1) Rich
- (2) Poor
- (3) Balanced
- (4) Absent

22. Iodine is used in milk for detecting adulteration for

- (1) Water
- (2) Starch
- (3) Cow's milk in Buffalo's milk
- (4) Plant fat

23. In artificial insemination

- (1) Embryo is transferred
- (2) Ovum is transferred
- (3) Semen is harvested
- (4) In vitro fertilisation

24. Milk of cow is yellowish due to

- (1) Vitamin A
- (2) Xanthene
- (3) Natural pigment
- (4) Carotene

30. *Innovators have a salient feature associated with them. It is*

- | | |
|-----------------|-----------------|
| (1) Respectable | (2) Venturesome |
| (3) Deliberate | (4) Skeptical |

31. *Adopter category is based on*

- | | |
|--------------------|----------------|
| (1) Education | (2) Innovation |
| (3) Innovativeness | (4) Awareness |

32. *A farmer can become an entrepreneur by*

- (1) *Adopting a new technology*
- (2) *By considering his farm as business operation*
- (3) *Learning new method of agriculture*
- (4) *Developing a new practice*

33. *A social process through cultural difference between two or more societies disappear and develop a common culture is called*

- | | |
|---------------------|-------------------|
| (1) Assimilation | (2) Accommodation |
| (3) Sanskritisation | (4) Diffusion |

34. *Communication is*

- (1) *Telling something*
- (2) *Verbal process*
- (3) *Non verbal process*
- (4) *Both verbal and non verbal process*

35. ——— is an idea, practice or object that is perceived as new by an individual or other unit of adoption.

- | | |
|-------------------|---------------|
| (1) Communication | (2) Diffusion |
| (3) Innovation | (4) Invention |

36. The persons who leave the ventures as soon as venture is created.

- | | |
|------------------------------|------------------------------|
| (1) Mobile entrepreneurs | (2) Managerial entrepreneurs |
| (3) Intonative entrepreneurs | (4) Empire builders |

37. The unconsolidated debris overlying the hard, unweathered bedrock is called as

- | | |
|-----------------|------------------|
| (1) Lithosphere | (2) Pedosphere |
| (3) Regolith | (4) Stratosphere |

38. The comprehensive system of soil classification is popularly known as

- | | |
|-----------------------|------------------------|
| (1) 8th Approximation | (2) 7th Approximation |
| (3) 9th Approximation | (4) 10th Approximation |

39. The highest category of soil nomenclature is called as

- | | |
|-----------------|------------|
| (1) Great group | (2) Order |
| (3) Family | (4) Series |

18P/202/23 (1)

57. Bhindi yellow vein clearing disease is transmitted by

- | | |
|---------------------------|--------------------------------|
| (1) <i>Aphis gossypii</i> | (2) <i>Oligonychus indicus</i> |
| (3) <i>Bemisia tabaci</i> | (4) <i>Amrasca devastans</i> |

58. Dense webbing of rice grain in storage results due to

- | | |
|--------------------------|----------------------|
| (1) Angoumois grain moth | (2) Rice moth |
| (3) Rice weevil | (4) Red flour beetle |

59. Bee's wax contains

- | | |
|------------------------------------|-----------------------|
| (1) Hydroxy methyl furfural | (2) Myrisyl palmitate |
| (3) <i>n</i> -acetyl glucose amine | (4) Lauryl acetate |

60. *Epiricania melanoleuca*, an ectoparasitoid is effective against

- | | |
|------------------------|-----------------------|
| (1) Sugarcane mealybug | (2) Sugarcane Pyrilla |
| (3) Sugarcane whitefly | (4) Sugarcane scale |

61. In which method of planting maximum number of plants per unit area can be accommodated

- | | |
|---------------|-----------------|
| (1) Square | (2) Rectangular |
| (3) Hexagonal | (4) Quincunx |

52. Eggs of mango mealy bug are laid in

- (1) Leaf (2) Tree trunk
(3) Crevices (4) Soil

53. The non-chitinous layer of insect integument is

- (1) Endocuticle (2) Exocuticle
(3) Epicuticle (4) Epidermis

54. In cyclorrhapous dipterans, the fusion of *carpora cardiaca*, *carpora allata* and prothoracic glands is referred to as

- (1) Craber's organ (2) Simpher's organ
(3) Weismann's ring (4) Gyroscopic organ

55. Vasiform orifice is a characteristic feature of

- (1) Delphacidae (2) Aleyrodidae
(3) Cercopidae (4) Membracidae

56. Universal antidote is the mixture of activated charcoal : tannic acid : MgO in the ratio of

- (1) 2:1:1 (2) 1:2:1 (3) 1:1:2 (4) 1:1.5:2

62. Mango variety which is suitable for high density planting
- (1) Ratna (2) Dashehri
(3) Langra (4) Amrapalli
63. Jelly in which fruit peels remain suspended is called as
- (1) Jam (2) Cordial
(3) Marmalade (4) Candy
64. Buttoning is the problem in which of the following crops
- (1) Okra (2) Cauliflower
(3) Melon (4) Chillies
65. Most economic method of irrigation in orchard under water scarcity condition is
- (1) Sprinkler system (2) Drip system
(3) Ring system (4) Flooding system
66. Winter Banana is a variety of
- (1) Apple (2) Mango (3) Banana (4) Pear
67. Where does India rank in production of fruits in the world ?
- (1) First (2) Second (3) Third (4) Fourth

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68. Which one of the following is quickest method of establishing a lawn ?

- | | |
|--------------|---------------------|
| (1) Dibbling | (2) Seeding |
| (3) Turfing | (4) Turf plastering |

69. Edible part of Knol-Khol is

- | | |
|----------|------------|
| (1) Stem | (2) Root |
| (3) Leaf | (4) Flower |

70. Fruit of Papaya is botanically known as

- | | |
|-----------------|-----------|
| (1) Pome | (2) Drupe |
| (3) Hesperidium | (4) Berry |

71. In Aonla, intervarietal plantation is done due to

- | | |
|---------------------------------|--------------------------------|
| (1) Shy bearing nature of Aonla | (2) Presence of male sterility |
| (3) Self incompatibility | (4) Cross incompatibility |

72. 'Black heart' is a physiological disorder of

- | | |
|-------------|------------|
| (1) Tomato | (2) Chili |
| (3) Cabbage | (4) Potato |

73. Tungro disease of rice is caused by

- | | |
|--------------|-------------------|
| (1) Bacteria | (2) Actinomycetes |
| (3) Algae | (4) Virus |

74. Button mushroom belongs to the genus

- (1) *Volvariella* (2) *Agaricus*
(3) *Amanita* (4) *Pleurotus*

75. Meristem tip culture is followed for

- (1) Elimination of bacteria (2) Elimination of fungi
(3) Elimination of virus (4) Elimination of nematodes

76. Which of the following disease occurs due to deficiency of zinc ?

- (1) Pansukh disease (2) Bunt of rice
(3) Khaira disease of rice (4) Blast disease of rice

77. Powdery Mildew of fungi belongs to order

- (1) Peronosporales (2) Erisiphales
(3) Mucorales (4) Uredinales

78. *Cuscuta* sp. is a

- (1) Total root parasite (2) Partial root parasite
(3) Total stem parasite (4) Partial stem parasite

79. Which disease was responsible for the Great Bengal Famine in 1942-43 ?

- (1) Late Blight of Potato (2) Rice Blast
(3) Brown Spot of Rice (4) Wheat Rust

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80. Genetic material in tobacco mosaic Virus is

- (1) DNA (2) DNA or RNA
(3) RNA (4) DNA and RNA both

81. Scientist who discovered Transduction in bacteria

- (1) Zinder and Lederberg (2) Lederberg and Tatum
(3) Leeuwenhoek (4) Louis Pasteur and Nicholas

82. Casein is obtained from

- (1) Milk (2) Wheat (3) Barley (4) Maize

83. Late Blight of Potato is caused by

- (1) *Alternaria solani* (2) *Phytophthora infestans*
(3) *Fusarium sp.* (4) *Colletotrichum sp.*

84. Soil surrounding living root is known as

- (1) Rhizosphere (2) Rhizoplane
(3) Rhizoids (4) Rhizomorph

85. Magnesium is an important constituent of one of the following molecule.

- (1) Phytochrome (2) Chlorophyll
(3) Xanthophyll (4) Haem protein

86. Plants of which family are reported to assimilate CO_2 in night.
- (1) Leguminosae (Pea etc.)
 - (2) Crassulaceae (Bryophyllum etc.)
 - (3) Cucurbitaceae (Bitter gourd etc.)
 - (4) Malvaceae (Hibiscus etc.)
87. In saline soil the movement (loss) of water from roots to soil occur through one of the following process
- (1) Guttation
 - (2) Leaching
 - (3) Exo-osmosis
 - (4) Evaporation
88. Which one is Amino acid among the following ?
- (1) Oxalic acid
 - (2) Carbonic acid
 - (3) Proline
 - (4) Malic acid
89. 'Kranz' anatomy is found in the leaves of
- (1) Potato
 - (2) Groundnut
 - (3) Maize
 - (4) Cauliflower
90. Which one of the following is C_4 plant ?
- (1) Wheat
 - (2) Rice
 - (3) Sugarcane
 - (4) Mango
91. Which one has epigeal type of seed germination ?
- (1) Sorghum
 - (2) Bean
 - (3) Barley
 - (4) Turmeric

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92. Interveneal chlorosis in younger leaves is the characteristics deficiency symptom of one of the following
- (1) Nitrogen (2) Boron (3) Iron (4) Zinc
93. Gibbrellin enhances especially, one of the following process when sprayed on plants
- (1) Stunting (2) Rooting
(3) Elongation (4) Transpiration
94. In reduction reaction process what happens
- (1) Water is lost (2) Hydrogen is added
(3) Hydrogen is lost (4) Oxygen is added
95. Fruit setting is done through parthincarpy process in one of the following
- (1) Guava (2) Mango (3) Apple (4) Banana
96. In living plant cell conversion of Pyruvic acid into CO_2 and energy is called
- (1) Glycolysis (2) Photorespiration
(3) Krebs cycle (4) Carbon-transformation
97. As compared to main bacterial chromosome, the size of an episome is
- (1) 1/10 (2) 1/20 (3) 1/30 (4) 1/40

98. **Breeding value of an individual is**

- (1) Sum of average effect of genes
- (2) Difference of average effect of genes
- (3) Difference of additive and dominance effects of genes
- (4) Sum of additive and dominance effects of genes

99. **The scientists who demonstrated sexuality in bacteria**

- (1) Leeuwenhock and Kola
- (2) Lederberg and Tatum
- (3) Kircher and Koch
- (4) Louis Pasteur and Nicholas

100. **The term mutation breeding was given by**

- (1) Hugo de Vries
- (2) Jones
- (3) Muller
- (4) Nilson-Ehle

101. **Cell wall of Gram⁺ bacteria has a larger component of**

- (1) Lipoproteins
- (2) Phospholipids
- (3) Methylamine
- (4) Peptidoglycan

102. **In India, hybrid rice seed production is done through**

- (1) One line system
- (2) Two line system
- (3) Three line system
- (4) All of these

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103. Hardy-Weinberg law is applicable for maintenance of genetic purity of

- (1) Inbred lines
- (2) Open Pollinated Variety
- (3) Hybrids
- (4) Pureline

104. The most effective mutagen for cytoplasmic genes is

- (1) Ethidium Bromide
- (2) EMS
- (3) MMS
- (4) Sodium Azide

105. pBR322 is a

- (1) Degradation plasmid
- (2) Toxin producing plasmid
- (3) Walking plasmid
- (4) Reconstructed plasmid

106. Which one of these does not obey Mendel's law ?

- (1) Linkage
- (2) Independent assortment
- (3) Dominance
- (4) Purity of gametes

107. In a DNA sequence, if 'A' and 'T' comprise of 60%, the percentage of C will be

- (1) 30%
- (2) 20%
- (3) 45%
- (4) 15%

108. Which of the following is not true of DNA ?

- (1) 'A' pairs with 'T' and 'G' pairs with 'C'
- (2) Nitrogen bases are 0.34 nm apart on a DNA strand
- (3) The double helix is 2.0 nm wide
- (4) The double helix is 3.4 nm wide

109. When demand changes due to increase in its own price it is known as

- (1) Expansion in demand (2) Contraction in demand
(3) Increase in demand (4) Decrease in demand

110. Which holds good at Break Even Point ?

- (1) Total Return = Total Cost
(2) Marginal Return = Marginal Cost
(3) Marginal Return > Marginal Cost
(4) Total Return > Total Cost

111. Setting a price below that of the competition is called

- (1) Psychological pricing (2) Price skimming
(3) Competitive pricing (4) Penetration pricing

112. For production function $Y = 3X^2 - 6X + 15$, what is the value of elasticity of production at $X = 5$?

- (1) 24.0 (2) 2.0 (3) 1.0 (4) 0.5

113. In marketing, 'place utility' is created through

- (1) Transport (2) Grading (3) Processing (4) Insurance

119. The essence of Engel's law is that as family incomes rise ——— .

- (1) The savings rate increases
- (2) The proportion of income spent on food declines
- (3) Expenditure on food declines
- (4) Proportion of income spent on luxuries declines

120. The law that determines the best uses of limited resources among alternative uses is known as

- (1) Law of variable proportion
- (2) Law of equi-marginal return
- (3) Law of demand
- (4) Law of supply

ROUGH WORK

रफ़ कार्य

अभ्यर्थियों के लिए निर्देश

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

1. प्रश्न पुस्तिका मिलने के 30 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 प्रवेश-पत्र के अतिरिक्त, लिखा या सादा कोई भी खुला कागज साथ में न लायें।
3. ओ.एम.आर. उत्तर-पत्र अलग से दिया गया है। इसे न तो मोड़ें और न ही विकृत करें। दूसरा ओ.एम.आर. उत्तर-पत्र नहीं दिया जायेगा। केवल ओ.एम.आर. उत्तर-पत्र का ही मूल्यांकन किया जायेगा।
4. सभी प्रविष्टियाँ प्रथम आवरण-पृष्ठ पर नीली/काली पेन से निर्धारित स्थान पर लिखें।
5. ओ.एम.आर. उत्तर-पत्र के प्रथम पृष्ठ पर पेन से अपना अनुक्रमांक निर्धारित स्थान पर लिखें तथा नीचे दिये वृत्तों को गाढ़ा कर दें। जहाँ-जहाँ आवश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक, केन्द्र कोड नम्बर तथा सेट का नम्बर उचित स्थानों पर लिखें।
6. ओ.एम.आर. उत्तर-पत्र पर अनुक्रमांक संख्या, प्रश्न-पुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्न-पुस्तिका पर अनुक्रमांक संख्या और ओ.एम.आर. उत्तर-पत्र संख्या की प्रविष्टियों में उपरिलेखन की अनुमति नहीं है।
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 ओ.एम.आर. 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 लिए 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 लिए प्रश्न-पुस्तिका के मुखपृष्ठ के अन्दर वाला पृष्ठ तथा उत्तर-पुस्तिका के अंतिम पृष्ठ का प्रयोग करें।
12. परीक्षा की समाप्ति के बाद अभ्यर्थी अपना ओ.एम.आर. उत्तर-पत्र परीक्षा कक्ष/हाल में कक्ष निरीक्षक को सौंप दें। अभ्यर्थी अपने साथ प्रश्न पुस्तिका तथा ओ.एम.आर. उत्तर-पत्र की प्रति ले जा सकते हैं।
13. अभ्यर्थी को 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।