

Set No. 1

17P/202/26

Question Booklet No.....

(To be filled up by the candidate by blue/black ball-point pen)

Roll No.

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Roll No.

(Write the digits in words) .....

2017

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 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 without its envelope*.
3. A separate Answer Sheet is given. *It should not be folded or mutilated. A second Answer Sheet shall not be provided. Only the Answer Sheet will be evaluated.*
4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.
5. **On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.**
6. No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR sheet and 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 : 20+2]



17P/202/26 Set No. 1

**No. of Questions : 120**

**Time : 2 Hours**

**Full Marks : 360**

- Note :**
- (1) Attempt as many questions as you can. Each question carries 3 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. An expenditure on education, public health, social insurance, etc., by the Government is which type of public expenditure?

- |                          |                        |
|--------------------------|------------------------|
| (1) Defence expenditure  | (2) Civil expenditure  |
| (3) Economic expenditure | (4) Social expenditure |

2. National income ordinarily means

- (1) Gross National Product (GNP) at market price
- (2) Net National Product (NNP) at market price
- (3) GNP at factor cost
- (4) NNP at factor cost

(3)

1

(P.T.O.)



8. A monopolistic competition is the market structure where
- (1) there are large number of sellers selling identical products
  - (2) there are large number of sellers selling differentiated products but close substitutes
  - (3) there is only one seller of the products
  - (4) there is only one buyer of the products
9. Which one of the following is not among 3R's of credit to test the economic feasibility?
- (1) Returns from the investment
  - (2) ~~Repayment capacity~~
  - (3) Rate of interest
  - (4) Risk bearing ability
10. Marginal Cost (MC) is equal to
- (1) the ratio of Total Cost (TC) and total output (Y)
  - (2) the ratio of change in Total Cost ( $\Delta TC$ ) and change in total output ( $\Delta Y$ )
  - (3) the ratio of change in Total Cost ( $\Delta TC$ ) and change in total input ( $\Delta X$ )
  - (4) the ratio of Total Cost (TC) and total input (X)
11. An indifference curve shows the
- (1) various combination of two commodities yielding same level of satisfaction
  - (2) various combination of two commodities yielding same level of cost
  - (3) various combination of two commodities yielding decreasing satisfaction
  - (4) various combination of two commodities yielding decreasing cost

12. A statement of assets and liabilities of a farm at a point of time is called

- (1) Income Statement                      (2) Balance Sheet  
(3) Farm Budgeting                        (4) Cash Flow Statement

13. For maintenance of soil fertility, appropriate cropping system is

- (1) monoculture                              (2) multiple cropping  
(3) mixed cropping                          (4) crop rotation

14. Which one of the following is day neutral plant?

- (1) Sunflower      (2) Safflower      (3) Mustard      (4) Linseed

15. Most suitable cereal crop for pH range 4.0-6.0 is

- (1) barley              (2) rice              (3) maize              (4) wheat

16. Indicate the term not related with potato crop

- (1) bulking              (2) tuberization      (3) silking              (4) suberization

17. Deficiency symptoms of which nutrient element appears in terminal buds of the plant?

- (1) Boron              (2) Copper              (3) Iron              (4) Zinc

18. In general best method of fertilizer application in cereal crops is

- (1) broadcast                                  (2) broadcast and incorporation  
(3) band placement                          (4) point placement

19. Excess amount of which of the following nutrients in soil causes iron and zinc deficiency in plants?  
 (1) Nitrogen      (2) Phosphorus      (3) Potassium      (4) Calcium
20. Consumptive use of water refers to  
 (1) Evaporation (E)  
 (2) Transpiration (T)  
 (3) Evaporation (E) + Transpiration (ET)  
 (4) ET + Metabolic needs
21. For good yield, in most crops irrigation is must at  
 (1) seedling stage      (2) grand growth stage  
 (3) flowering stage      (4) ripening stage
22. Suitable herbicide for weed control in pulse crops is  
 (1) isoproturon      (2) 2,4-D      (3) atrazine      (4) pendimethalin
23. Which one of the following is not grassy weed?  
 (1) *Eleusine indica*      (2) *Digera arvensis*  
 (3) *Digitaria sanguinalis*      (4) *Chloris barbata*
24. *Convolvulus arvensis* weed is classified as  
 (1) perennial herbaceous      (2) perennial woody  
 (3) biennial      (4) annual

25. It refers to the informal education that a child receives from his family, neighbours, friends and peers

- (1) acculturation (2) assimilation  
(3) socialization (4) social diffusion

26. The first KVK was established in

- (1) Delhi (2) Bengaluru (3) Pune (4) Puducherry

27. "Learning is strengthened, when the learning experience is followed by satisfaction to the learner." is

- (1) law of readiness (2) law of effect  
(3) law of exercise (4) law of belonging

28. To show relative worth of a new practice over an old one, the extension method best suited is

- (1) method demonstration (2) group discussion  
(3) campaign (4) result demonstration

29. ATMA operates at

- (1) Block level (2) District level (3) State level (4) National level

30. The spread of mobile phones usage in a social system relates to the concept of

- (1) diffusion (2) teaching (3) learning (4) adoption



31. Tendency of the people to think of their culture as best is known as  
(1) egoism (2) ethnocentrism  
(3) cultural relativism (4) illusory superiority
32. Any relatively permanent change in behaviour that occurs as a result of practice and experience  
(1) attention (2) learning (3) perceiving (4) teaching
33. Community Development Programme was started in the year  
(1) 1952 (2) 1985 (3) 1945 (4) 1955
34. The word 'extension' is derived from which of the following languages?  
(1) French (2) Latin (3) Greek (4) Spanish
35. Communication is a  
(1) method (2) system (3) technique (4) process
36. This State became the 1st State to reserve 50% of seats for women in the Panchayati Raj Institutions  
(1) Madhya Pradesh (2) Rajasthan  
(3) Bihar (4) Himachal Pradesh
37. International Flower Market is situated at  
(1) Germany (2) Netherlands (3) Columbia (4) Switzerland

38. Dahlia is propagated through  
(1) corms            (2) rhizome            (3) tubers            (4) seeds
39. Which is the most commonly used rootstock for rose propagation in North India?  
(1) *R. indica* var, *odorata*            (2) *R. multiflora*  
(3) *R. centifolia*            (4) *R. moschata*
40. Tuberose belongs to the family  
(1) Convolvulaceae            (2) Amaryllidaceae  
(3) Compositae            (4) Iridaceae
41. Rock garden is situated at  
(1) Bengaluru            (2) Hyderabad            (3) Chandigarh            (4) Saharanpur
42. Indian shot is the name given to the seeds of  
(1) canna            (2) rose            (3) tulip            (4) gladiolus
43. Sugar percent in jelly should be  
(1) 50-55%            (2) 60-65%            (3) 65-70%            (4) 70-75%
44. Modified stem of banana is called  
(1) sword sucker            (2) rhizome            (3) water sucker            (4) corm

45. Pointed gourd is propagated by  
 (1) root cutting (2) stem cutting (3) seed (4) None of these
46. Amrapali is a cross between  
 (1) Neelam × Dasherri (2) Dasherri × Neelam  
 (3) Ratna × Alphonso (4) Dasherri × Alphonso
47. Guava fruit is botanically known as  
 (1) drupe (2) hesperidium (3) berry (4) pome
48. Mango inflorescence contains which type of flowers?  
 (1) Male and hermaphrodite (2) Male and female  
 (3) Male and neutral (4) Female and hermaphrodite
49. Casein is manufactured from  
 (1) corn (2) rice (3) milk (4) wheat
50. The greenish color of *chhana* whey is due to the presence of  
 (1) carotene (2) riboflavin (3) chlorophyll (4) lycopene
51. Which one of the following milk contains maximum amount of lactose?  
 (1) Cow (2) ~~Buffalo~~ (3) ~~Goat~~ (4) Human



58. The efficiency of milk pasteurization is determined by  
 (1) turbidity test (2) hotis test  
 (3) Hehner test (4) phosphatase test
59. During *dahi* production, inoculated milk is normally incubated at 22-25 °C for  
 (1) 10-12 hours (2) 13-15 hours (3) 16-18 hours (4) 20-22 hours
60. Which one of the following dried milk is manufactured maximum in India?  
 (1) Skim milk powder (2) Whole milk powder  
 (3) Malted milk powder (4) Infant milk powder
61. 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
62. If  $n$  = number of parents and  $s$  = sample size of the cross, the number of crosses required for partial diallel analysis can be obtained by the formula  
 (1)  $ns/2$  (2)  $n(ns)/2$  (3)  $ns$  (4)  $2ns$
63. Joint scaling test is performed to detect  
 (1) presence of dominance (2) presence of non-additiveness  
 (3) presence of additiveness (4) presence of epistasis

(3)

64. Presence of reverse transcriptase was discovered from AMV virus by  
(1) H. Temin and D. Baltimore (2) H. G. Khorana  
(3) Zaenen et. al. (4) Maxam and Gilbert
65. Which one of the following is not needed for DNA transcription?  
(1) Ribosomes (2) Nucleotides (3) DNA (4) Enzymes
66. If partial dominance is present at an inhibitory locus the expected phenotypic ratio is  
(1) 13 : 3 (2) 12 : 3 : 1 (3) 9 : 6 : 1 (4) 7 : 6 : 3
67. The most effective mutagen for cytoplasmic genes is  
(1) ethidium bromide (2) EMS  
(3) MMS (4) sodium azide
68. For exploitation of both additive and non-additive gene effects in cross-pollinated crops, the most effective method is  
(1) simple recurrent selection (2) recurrent selection for SCA  
(3) recurrent selection for GCA (4) reciprocal recurrent selection
69. Inbred lines can be improved by  
(1) transgressive breeding (2) mutation breeding  
(3) back cross method (4) All of these

70. The scientists who demonstrated sexuality in bacteria
- (1) Leeuwenhoek and Kola                      (2) Lederberg and Tatum  
 (3) Kircher and Koch                            (4) Louis Pasteur and Nicholas
71. As compared to main bacterial chromosome, the size of an episome is
- (1) 1/10                      (2) 1/20                      (3) 1/30                      (4) 1/40
72. The term *mutation breeding* was given by
- (1) Hugo de Vries                                  (2) Jones  
 (3) Muller    (4) Nilsson-Ehle
73. The process involved in water loss from the leaf surface is called
- (1) evaporation                                      (2) evapotranspiration  
 (3) guttation    (4) ~~transpiration~~
74. The color pigment involved in flowering in plant is
- (1) chlorophyll                                      (2) anthocyanin  
 (3) cytochrome                                      (4) phytochrome
75. Which one of the following plants is very efficient in photosynthesis?
- (1) Wheat                      (2) Sorghum                      (3) ~~Amaranthus~~                      (4) Cicer

- 76.** Deficiency of which element causes *Khaira* disease in rice?  
(1) Ca                      (2) Mg                      (3) B                      (4) Zn
- 77.** Identify the plant hormone involved in initiation of rooting in cuttings  
(1) cycocel              (2) TIBA                      (3) 2,4-D                      (4) IBA
- 78.** Which one of the following is an amino acid?  
(1) Phytic acid    (2) Glutamic acid  
(3) Abscisic acid    (4) Gibberellic acid
- 79.** The conversion of sugar to pyruvic acid is called  
(1) hydrolysis              (2) glycolysis              (3) phytolysis              (4) cyclosis
- 80.** The first product of photosynthesis in  $C_3$  plant is  
(1) sucrose    (2) oxaloacetate  
(3) glycerol    (4) phosphoglyceric acid
- 81.** Hydrolysis of fat is catalyzed by  
(1) hydrolase              (2) catalase                      (3) lipase                      (4) amylase
- 82.** Which one of the following is also known as Diffusion Pressure Deficit?  
(1) Osmotic pressure    (2) Wall pressure  
(3) Suction pressure    (4) Turgor pressure



83. Which element is related to nitrogen fixation in leguminous plants?  
 (1) Ca (2) Mo (3) B (4) Cd
84. Which hormone causes leaf senescence and ageing?  
 (1) BA (2) ABA (3) GA (4) IAA
85. Indian Type Culture Collection (ITCC) is a collection of  
 (1) bacteria (2) algae (3) fungi (4) viruses
86. The term necrosis indicates  
 (1) curling (2) death of cells (3) blighting (4) mosaic
87. The bacterial cell wall is made of  
 (1) pectin (2) muramic acid  
 (3) chitin (4) cellulose
88. Needham is associated with studies on  
 (1) seed pathology (2) epidemiology  
 (3) nematodes (4) systemic acquired resistance
89. The mungbean yellow mosaic virus is transmitted by  
 (1) whiteflies (2) sap (3) seeds (4) All of the above

90. The Koch's postulates is essential to establish

- (1) resistance (2) pathogenicity  
(3) susceptibility (4) hypersensitivity

91. Which one of the following is a total stem parasite?

- (1) Loranthus (2) Cuscuta (3) Orobanche (4) Striga

92. The black heart of potato is caused due to

- (1) frost injury (2) high light intensity  
(3) lack of oxygen (4) calcium deficiency

93. Ear cockle disease of wheat is caused by

- (1) *Anguina tritici* (2) *Meloidogyne incognita*  
(3) *Meloidogyne Javanica* (4) All of these

94. *Black leg* disease of potato is caused by

- (1) fungus (2) bacteria (3) virus (4) nematode

95. Which type of disease cannot be manage by quarantine?

- (1) Seed borne (2) Soil borne  
(3) Air borne (4) All of these

96. Toxin pyricularin is produced by  
 (1) fungus (2) bacteria (3) virus (4) nematode
97. The branch of Soil Science which deals with origin of soil, its classification and description is called as  
 (1) Petrology (2) Edaphology (3) Geology (4) Pedology
98. Relative proportion of sand, silt and clay in soil is called  
 (1) soil structure (2) soil horizon  
 (3) soil profile (4) soil texture
99. Resistance blocks give reasonably good moisture reading in the range of  
 (1) 0 to 0.8 bar potential (2) - 1 to - 15 bar potential  
 (3) 0 to - 15 bar potential (4) - 1 to 0.8 bar potential
100. Top growth of plants is normally satisfactory as long as the oxygen diffusion rate remains above  
 (1)  $20 \times 10^{-8}$  g/cm<sup>2</sup>/minute (2)  $30-40 \times 10^{-8}$  g/cm<sup>2</sup>/minute  
 (3)  $10-20 \times 10^{-8}$  g/cm<sup>2</sup>/minute (4)  $20-80 \times 10^{-8}$  g/cm<sup>2</sup>/minute
101. Negative charges on organic colloids originates due to presence of  
 (1) ketone and aldehyde groups (2) carboxyl and phenolic groups  
 (3) exposed crystal edges (4) isomorphous substitution

- 102.** Which one of the following is 1:1 type clay mineral?  
(1) Vermiculite      (2) Illite      (3) Nacrite      (4) Saponite
- 103.** Measurement of pH of a soil indicates  
(1) total acidity      (2) active acidity  
(3) residual acidity      (4) salt-replaceable acidity
- 104.** The favourable climate for the operation of podzolization process is  
(1) warm humid climate      (2) cold humid climate  
(3) arid climate      (4) semi-arid climate
- 105.** The most important feature of soil taxonomy is that it is based upon  
(1) soil forming factors      (2) soil forming processes  
(3) measurable soil properties      (4) climate
- 106.** Biofertilizers are  
(1) organic manure      (2) culture of the microorganisms  
(3) green manures      (4) mineral fertilizers
- 107.** C/N ratio of a normal cultivated soil ranged between  
(1) 6 to 8      (2) 14 to 16      (3) 10 to 12      (4) 18 to 20
- 108.** The 'Khaira disease' of rice is caused due to the deficiency of the following micronutrient  
(1) Boron      (2) Zinc      (3) Molybdenum      (4) Nickel

109. Which one of the following is the largest class in the phylum Arthropoda?  
(1) Arachnida (2) Crustacea (3) Diplopoda (4) Insecta
110. Gravid females of *Drosicha Mangiferae* lay eggs  
(1) on under surface of leaf (2) on tender shoots  
(3) under soil clods (4) on immature fruits
111. Use trap crops for managing an insect, pest population comes under the method of  
(1) physical control (2) cultural control  
(3) mechanical control (4) autocidal control
112. Mustard saw fly belongs to the order  
(1) Diptera (2) Dictyoptera (3) Hymenoptera (4) Neuroptera
113. 'Bunchy tops' in sugarcane are caused by  
(1) root borer (2) shoot borer (3) stalk borer (4) top borer
114. Polymorphism is found in  
(1) rice gundhi bug (2) sugarcane leaf hopper  
(3) mustard aphid (4) mango fruit flies
115. Number of generations of white grub in a year is  
(1) one (4) four  
(3) three

- 116.** Eruciform larvae are common in caterpillars belonging to order  
(1) Lepidoptera (2) Diptera (3) Coleoptera (4) Isoptera
- 117.** Many insects undergo hibernation in response to  
(1) high temperature (2) low temperature  
(3) darkness (4) high humidity
- 118.** Which one of the following is an insecticide of microbial origin?  
(1) Cartap (2) Spinosad (3) Fipronil (4) Imidacloprid
- 119.** Asymmetrical mouth parts are found in  
(1) thrips (2) termites (3) weevils (4) mites
- 120.** Which one of the following is insectivorous in nature?  
(1) *Callosobruchus Chinensis* (2) *Trogoderma Granarium*  
(3) *Coccinella Septempunctata* (4) *Rhyzopertha Dominica*

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## अभ्यर्थियों 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 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 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 करें। दूसरा उत्तर-पत्र नहीं दिया जायेगा, केवल उत्तर-पत्र का ही मूल्यांकन किया जायेगा।
4. अपना अनुक्रमांक तथा उत्तर-पत्र का क्रमांक प्रथम आवरण-पृष्ठ पर पेन से निर्धारित स्थान पर लिखें।
5. 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 तथा सेट का नम्बर उचित स्थानों पर लिखें।
6. ओ० एम० आर० पत्र पर अनुक्रमांक संख्या, प्रश्न-पुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्न-पुस्तिका पर अनुक्रमांक सं० और ओ० एम० आर० पत्र सं० 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 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।