

old M.Sc. Ag code No (340)

7378

Set No. 1

16P/202/2

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) ..... (2016) .....

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]

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16P/202/2 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. A bank has excess reserves to lend but is unable to find anyone to borrow the money. This will ——— the size of the money multiplier.

- |                       |              |
|-----------------------|--------------|
| (1) reduce            | (2) increase |
| (3) have no effect on | (4) double   |

2. The law of diminishing returns in wheat production occurs when

- (1) total input usage starts to increase
- (2) total yield starts to decline
- (3) marginal yield starts to decrease
- (4) average yield starts to decrease

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(P.T.O.)

3. For an economy as a whole, income must equal expenditure because
- (1) every rupee of spending by some buyer is a rupee of income for some seller
  - (2) International Law requires that income equal expenditure
  - (3) the number of firms is equal to the number of households in an economy
  - (4) every rupee of saving by some consumer is a rupee of spending by some other consumer
4. Economists use the term money to refer to
- (1) those types of wealth that are regularly accepted by sellers in exchange for goods and services
  - (2) all assets, including real assets and financial assets
  - (3) all financial assets, but real assets are not regarded as money
  - (4) all wealth
5. Development of farm sector gives a boost to secondary sector and development of both primary and secondary sectors give a boost to tertiary sector. This is called the product contribution of agriculture. This concept was coined by
- |                   |                   |
|-------------------|-------------------|
| (1) Ragnar Frisch | (2) Adam Smith    |
| (3) J. M. Keynes  | (4) Simon Kuznets |
6. Rent, wages, interest and profit are related to the term
- |                |                 |              |                  |
|----------------|-----------------|--------------|------------------|
| (1) production | (2) consumption | (3) exchange | (4) distribution |
|----------------|-----------------|--------------|------------------|

7. Indifference curves are those which
- (1) are circular in shape
  - (2) are concave in shape
  - (3) does not intersect each other
  - (4) always touches both X and Y axes
8. Which of the following is correct?
- (1) An increase in demand is same as extension of demand
  - (2) An increase in demand is not the same as extension of demand
  - (3) An increase in demand is less compared to extension of demand
  - (4) An increase in demand is more compared to extension of demand
9. If 3% change in price of the commodity leads to 15% change in quantity demanded, then elasticity of demand for that commodity is
- (1) 0.5                      (2) 5.0                      (3) 0.2                      (4) 0.4
10. Which of the following statements is correct?
- (1) In perfect competition,  $MC = MR = Price$
  - (2) In monopoly, MC cuts MR and greater than AR
  - (3) In perfect competition, MC cuts MR and  $< AR$
  - (4) In monopoly,  $AR < MR < MC$

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**11.** Inductive method of economic investigation was adopted by

- (1) Historical School of Economists of Germany
- (2) Classical Economists
- (3) Neo-Classical Economists
- (4) Keynes

**12.** Net National Product at factor cost is computed by

- (1) Gross National Product at factor cost - Depreciation - Indirect taxes + Subsidies
- (2) Gross National Product at factor cost + Depreciation - Indirect taxes + Subsidies
- (3) Gross National Product at factor cost - Depreciation + Indirect taxes + Subsidies
- (4) Gross National Product at factor cost - Depreciation - Indirect taxes - Subsidies

**13.** Alleles are

- (1) alternative forms of gene
- (2) false forms of gene
- (3) extra forms of gene
- (4) defective gene

**14.** The penetrance is

- (1) insertion of gene
- (2) elimination of gene
- (3) ability of a gene to express
- (4) incomplete expression of gene

15. When one gene specifies more traits, it is  
(1) pleiotropism (2) atavism (3) polytropism (4) dwarfism
16. Double monosomy has a general formula  
(1)  $2n - 1$  (2)  $2n - 1 - 1$  (3)  $2n - 2$  (4)  $2n - 2 - 2$
17. The functional unit of gene is  
(1) muton (2) recon (3) cistron (4) retron
18. Who discovered transposons?  
(1) Har Gobind Khorana (2) Morgan  
(3) Hugo de Vries (4) Barbara McClintock
19. Quantitative inheritance is through  
(1) effective genes (2) special genes  
(3) polygenes (4) ultragenes
20. Exchanges between non-homologous sets of chromosomes are  
(1) recombinations (2) inversions  
(3) translocations (4) transductions
21. The bacterium used in natural genetic engineering is  
(1) *Rhizobium* (2) *Agrobacterium*  
(3) *Streptococcus* (4) *Micrococcus*

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- 29.** Ratan Tata is an example of  
(1) mobile entrepreneur (2) managerial entrepreneur  
(3) innovative entrepreneur (4) empire builder
- 30.** The term 'entrepreneur' is derived from  
(1) Latin word (2) Greek word (3) French word (4) Chinese word
- 31.** Logical sequence of steps in extension teaching include  
(1) AICDAS (2) CADICS (3) AISCAD (4) AIDCAS
- 32.** Frequency of adopters when plotted over time, the curve follows  
(1) normal curve (2) skewed curve  
(3) curvilinear curve (4) nonlinear curve
- 33.** Communication process is stabilized by  
(1) empathy (2) credibility (3) feedback (4) feed front
- 34.** We tend to remember \_\_\_\_\_ per cent of what we see and hear.  
(1) 60 per cent (2) 70 per cent (3) 90 per cent (4) 50 per cent
- 35.** Community development will become holistic only when  
(1) Government comes out with excellent programmes  
(2) people take active part in the implementation of the programmes  
(3) non-Governmental organisations are active in the community  
(4) Governmental efforts are united with people's efforts

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(P.T.O.)

- 36.** Extension education process involves
- (1) six elements (2) four elements  
(3) five elements (4) seven elements
- 37.** An ability of a pathogen to cause a disease is known as
- (1) pathogenesis (2) pathogenicity  
(3) pathometry (4) pathology
- 38.** Bordeaux mixture was discovered by
- (1) H. A. deBary (2) M. Tillet  
(3) P. M. A. Millardet (4) E. J. Butler
- 39.** Conidia are arranged in acropetal succession in chain
- (1) *Alternaria* (2) *Aspergillus* (3) *Albugo* (4) *Fusarium*
- 40.** Gene for gene hypothesis was given by
- (1) A. F. Blakeslee (2) E. C. Stakman  
(3) Van der Plank (4) H. H. Fbr
- 41.** Destructive Insect and Pest Act was passed during the year
- (1) 1914 (2) 1946 (3) 1917 (4) 1956
- 42.** Bicelled teliospores are produced in the genus
- (1) *Uromyces* (2) *Puccinia* (3) *Melampsora* (4) *Ustilago*

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43. The disease cycle of wheat rust in India was discovered by  
(1) K. C. Mehta (2) E. J. Butler (3) R. Prasad (4) R. S. Singh
44. Sterility mosaic of Arhar is transmitted by  
(1) whitefly (2) apid  
(3) leafhopper (4) eriophyid mite
45. Thiram is a  
(1) copper fungicide (2) mercury fungicide  
(3) sulphur fungicide (4) sodium fungicide
46. Irish famine was due to  
(1) early blight of potato (2) bacterial blight of potato  
(3) brown spot of rice (4) late blight of potato
47. An example of internally seed borne disease is  
(1) loose smut of wheat (2) rust of wheat  
(3) rust of groundnut (4) covered smut of wheat
48. An example of gram +ve bacterium is  
(1) *Erwinia* (2) *Pseudomonas*  
(3) *Xanthomonas* (4) *Clavibacter*

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49. Cucurbits in early stage are mainly damaged by  
(1) Aphids (2) Jassids  
(3) Borers (4) red pumpkin beetle
50. *Heliothis armigera* is  
(1) Monophagous (2) oligophagous  
(3) Polyphagous (4) saprophyte
51. Who for the first time studied Indian insect type?  
(1) Linnaeus (2) Koenig (3) Fabricius (4) Lefory
52. Most of the insects have abdominal segments  
(1) 6 to 7 (2) 8 to 9 (3) 10 to 11 (4) 12 to 13
53. The density of pest population at which control measures should be applied?  
(1) GEL (2) PBL (3) EIL (4) ETL
54. Which of the fly is pest of cotton?  
(1) Fruit fly (2) Whitefly (3) Stem fly (4) Sawfly
55. Which of the following is pest of apple?  
(1) *Sylepta lunalis* (2) *Nodostoma subcostalum*  
(3) *Cydia hemidoxa* (4) *Erisoma lanigerum*

56. A typical 'Hopper burn' in rice is caused by feeding of  
 (1) aphids (2) gundhi bug  
 (3) brown plant hopper (4) mites
57. Giving complete coverage to one hectare of crop by spraying 60 to 250 litres of liquid is known as  
 (1) low volume spray (2) very low volume spray  
 (3) medium volume spray (4) high volume spray
58. If equilibrium population level of a crop damaging insect is above the economic injury level, it is a  
 (1) potential pest (2) not a pest  
 (3) sporadic pest (4) regular pest
59. Out of the following poisons which works as an anticoagulant for the control of rats?  
 (1) Zinc phosphide (2) Strychnine  
 (3) Warfarin (4) Parathion
60. Piercing and sucking type of mouth parts are found in  
 (1) grasshopper (2) housefly (3) aphids (4) beetles
61. As per PFA except Odisha and Punjab the fat in cow milk should not be less than \_\_\_\_\_ in whole of India.  
 (1) 3.0% (2) 3.5% ~~(3) 4.0%~~ (4) 4.5%

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- 70.** The starter culture for Dahi preparation should be cultivated at  
(1) 22 °C                      (2) 25 °C                      (3) 30 °C                      (4) 37 °C
- 71.** Inadequate homogenization of ice cream mix may result is a texture defect known as  
(1) sandy                      (2) buttery                      (3) icy                      (4) coarse
- 72.** Iodine value of Ghee measures  
(1) saturated fatty acid linkage                      (2) unsaturated fatty acid linkage  
(3) volatile water soluble fatty acids                      (4) volatile water insoluble fatty acids
- 73.** The combination of fruit and flower arrangement is called  
(1) Morimana                      (2) Moribana                      (3) Zen-ei-bana                      (4) Jiyubana
- 74.** Ethylene during transportation of flowers causes  
(1) bent neck                      (2) calyx splitting  
(3) culorosis                      (4) sleepiness
- 75.** Running water is main feature of  
(1) Japanese garden                      (2) Rose garden  
(3) Mughal garden                      (4) Rock garden
- 76.** 'Pusa Narangi' is a variety of  
(1) citrus                      (2) marigold                      (3) gladiolus                      (4) tuberose

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- 77.** Bronzing in guava is associated with the deficiency of  
(1) Zn                      (2) Mn                      (3) Mg                      (4) Cu
- 78.** 'Pusa Early Dwarf' is a variety of  
(1) apple                      (2) strawberry                      (3) guava                      (4) grape
- 79.** Aroma in the ripe fruit of apple is due to  
(1) hexanol    (2) eugenol  
(3) isopentanol    (4) ethyl-2-methyl butyrate
- 80.** Which of the following crops is summer dormant?  
(1) Aonla                      (2) Pomegranate                      (3) Ber                      (4) Phalsa
- 81.** Parents of 'Amrapali' mango are  
(1) Dashehari × Neelam    (2) Neelam × Dashehari  
(3) Langra × Neelam    (4) Neelam × Langra
- 82.** Aonla flowers in the month of  
(1) April                      (2) May                      (3) June                      (4) July
- 83.** Andromonoecious flowers are found in  
(1) bottle gourd                      (2) bitter gourd                      (3) ridge gourd                      (4) muskmelon



- 84.** Weeping Jelly is caused by  
(1) excess of acid (2) excess of sugar  
(3) excess of water (4) excess of pectine
- 85.** India lies in the latitudinal range of  
(1) 8° N-36° N (2) 4° N-12° N (3) 13° N-24° N (4) 15° N-30° N
- 86.** Suitable soil bulk-density for normal crop growth is  
(1) 1.7 gm/cm<sup>3</sup> (2) 1.5 gm/cm<sup>3</sup> (3) 1.3 gm/cm<sup>3</sup> (4) >1.8 gm/cm<sup>3</sup>
- 87.** Water lost from the soil during the crop life cycle is termed as  
(1) metabolic (2) conjunctive (3) transpiration (4) evaporative loss
- 88.** Which plant nutrient-ion is lost by leaching the most?  
(1) K<sup>+</sup> (2) NH<sub>4</sub><sup>+</sup> (3) NO<sub>3</sub><sup>-</sup> (4) H<sub>2</sub>PO<sub>4</sub><sup>-</sup>
- 89.** Most effective weedicide for control of Phalaris minor weed plant in wheat is  
(1) butachlor (2) isoproturon (3) atrazine (4) 2, 4-D
- 90.** Predominant ion in acidic soil is  
(1) Ca<sup>++</sup> (2) Mg<sup>+</sup> (3) H<sup>+</sup> (4) Na<sup>+</sup>

- 91.** Most critical stage for one irrigation in wheat is
- (1) dough (2) grand period of growth  
(3) CRI (4) tillering, stage
- 92.** Wind erosion is common in the State of
- (1) W. Bengal (2) Rajasthan  
(3) Karnataka (4) Andhra Pradesh
- 93.** At which crop stage soil moisture stress is most harmful in groundnut crop?
- (1) Early growth (2) Pegging  
(3) Maturity (4) Nut formation
- 94.** Most sensitive crop to poor soil aeration is
- (1) maize (2) wheat (3) tobacco (4) sugarcane
- 95.** Economy in nitrogen fertilizer use in paddy crop be made by the use of
- (1) azotobacterin (2) rhizobium culture  
(3) blue-green algae (4) phosphobacterin
- 96.** Organism used in preparation of vermicompost is
- (1) azotobacter (2) actinomycetes  
(3) rhizobium sps (4) eisenia foetida

97. Which of the following is accessory pigment for photosynthesis?  
(1) Phytochrome (2) Cytochrome  
(3) Chlorophyll (4) Xanthophyll
98. Identify the non-essential mineral nutrient in plant  
(1) chlorine (2) copper (3) chromium (4) zinc
99. Which of the following is first product of photosynthesis in sugarcane?  
(1) Phosphoglyceric acid (2) Glyceric acid  
(3) Oxalic acid (4) Oxaloacetic acid
100. What is the oxygen level in atmosphere?  
(1) 12% (2) 21% (3) 36% (4) 41%
101. Identify the plant in which stomata open during night  
(1) sorghum (2) apple (3) linseed (4) pineapple
102. Who developed the Avena Coleoptile Test for auxin bioassay?  
(1) K. V. Thimann (2) F. W. Went  
(3) F. B. Salisbury (4) A. C. Leopold
103. Which scientist postulated the theory of pressure flow for solute transport in plants?  
(1) De Vries (2) Curtis (3) Miller (4) Munch

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- 104.** Which form of nitrogen is mostly taken by plant?  
(1) Ammonia (2) Nitrate  
(3) Nitrite (4) Molecular nitrogen
- 105.** Identify the sugar with four carbon atoms  
(1) erythrose (2) xylose (3) ribose (4) heptose
- 106.** Which of the following is a non-essential amino acid?  
(1) Alanine (2) Leucine (3) Histidine (4) Valine
- 107.** How many ATP are consumed/utilised in glycolysis?  
(1) 1 ATP (2) 2 ATP (3) 3 ATP (4) 0 ATP
- 108.** Which of the following belongs to Flavr Savr a transgenic fruit?  
(1) Papaya (2) Avocado (3) Tomato (4) Mandarin
- 109.** Soils of Indo Gangetic Plains have developed from the parent material  
(1) igneous rock (2) alluvium  
(3) metamorphic rocks (4) basalt
- 110.** In India largest area of land degradation has occurred due to  
(1) water erosion (2) wind erosion  
(3) water logging (4) salinity

111. Montmorillonitic clay minerals are predominant in  
(1) alluvial soil (2) red soil (3) laterite soil (4) black soil
112. Which soil can be reclaimed best by application of gypsum?  
(1) Saline soil (2) Saline-alkali soil  
(3) Alkali soil (4) Acid soil
113. Moisture retained in soil at 15 bar soil moisture tension is called  
(1) field capacity moisture (2) wilting point moisture  
(3) available soil moisture (4) hygroscopic moisture
114. A soil has a gravimetric moisture content 18 p.c. and bulk density  $1.5 \text{ Mg/m}^3$ . The volumetric moisture content of the soil is  
(1) 24 p.c. (2) 27 p.c. (3) 30 p.c. (4) 33 p.c.
115. Among the following fertilizers which contains the highest percentage of nitrogen?  
(1) Urea (2) Ammonium sulphate  
(3) Ammonium chloride (4) Calcium ammonium nitrate
116. The optimum N:P:K ratio for balanced fertilizer use in most of the crops is of the order of  
(1) 4:4:2 (2) 4:2:1 (3) 6:4:2 (4) 6:2:1

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- 117.** Which of the following is a high analysis fertilizer?
- (1) Triple superphosphate                      (2) Nitrophosphate  
(3) Single superphosphate                      (4) Ammonium polyphosphate
- 118.** The secondary nutrient element required for plant growth is
- (1) zinc                      (2) iron                      (3) sulphur                      (4) copper
- 119.** The most important microflora in decomposition of organic matter and plant nutrients availability in soil is
- (1) bacteria                      (2) fungi                      (3) actinomycetes                      (4) algae
- 120.** Which is a symbiotic nitrogen fixer in soil?
- (1) Cyanobacteria                      (2) Azospirillum  
(3) Nitrobactor                      (4) Rhizobia

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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।