The candidate should ensure that Question Paper Booklet No. of the Question Paper Booklet and Answer Sheet must be same after opening the Paper Seal / Polythene bag. In case they are different, a candidate must obtain another Question Paper. Candidate himself shall be responsible for ensuring this.

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, F.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.
1. निम्न में से किस सब्जी में अंतःप्रजनन घास अधिकतम होता है?
   (1) ज्वार
   (2) अल्फा-अल्फा
   (3) बाजरा।
   (4) सूरजमुखी

2. बीज जीवता परीक्षण के लिए निम्न में से कौन सा रसायन कम में लेते हैं?
   (1) टेट्राजोलियम क्लोराइड
   (2) इथार
   (3) धार्मिकॉयरा
   (4) बेंजीन

3. आधार बीज के कट्टे पर लगे चिन्हित पत्र का रंग होता है?
   (1) सफेद
   (2) हरा
   (3) नीला
   (4) सुनहरी पीला

4. अधिकतम संकर औज किसके द्वारा व्यक्त किया जाता है?
   (1) एकल संकरण
   (2) द्वि-संकरण
   (3) त्रिसंकरण
   (4) शीर्ष संकरण

5. संकर किसी प्रथम उत्पाद में निम्न में से किस सब्जी में विकसित हुई?
   (1) ज्वार
   (2) मक्का
   (3) प्याज
   (4) आण्डी

1. Which of the following crops show a very high degree of inbreeding depression?
   (1) Sorghum
   (2) Alfalfa
   (3) Pearl millet
   (4) Sunflower

2. Which of the following chemical is used for testing seed viability?
   (1) Tetrazolium chloride
   (2) Ether
   (3) Thiourea
   (4) Benzene

3. The colour of the tag used to label foundation seed bag is
   (1) White
   (2) Green
   (3) Blue
   (4) Golden yellow

4. Maximum heterosis is manifested by
   (1) Single cross
   (2) Double cross
   (3) Three way cross
   (4) Top cross

5. Hybrid varieties were first developed in the following crop:
   (1) Sorghum
   (2) Maize
   (3) Onion
   (4) Castor

02 (Agriculture)
6. The amphidiploid Brassica Juncea has been evolved through hybridization between
   (1) Brassica campestris × Brassica napus
   (2) Brassica campestris × Brassica nigra
   (3) Brassica carinata × Brassica nigra
   (4) Brassica nigra × Brassica oleracea

7. Pure-line theory was proposed by
   (1) John
   (2) Mendel
   (3) Johannsen
   (4) Swaminathan

8. MPMH17, RHB223, MPMH21 and RHB224 are the recommended hybrids of
   (1) Maize
   (2) Sorghum
   (3) Cotton
   (4) Bajra

9. A tall plant is crossed with a dwarf plant. In the progeny, about one half of the plants are tall and remaining one half are dwarf. Determine the genotypes of the tall and dwarf plants.
   (1) TT × tt
   (2) Tt × Tt
   (3) Tt × tt
   (4) tt × tt

10. Which one great soil group of the following belongs to order zonal soils?
    (1) Laterite soils
    (2) Alluvial soils
    (3) Saline soils
    (4) Regosols
11. The height of aircraft for aerial photographic soil survey depends upon
   a. Scale of aerial photography
   b. Type of camera
   c. Focal length of camera
   d. Area of photography
Select the correct answer from above
   (1) a & b  (2) b & c  (3) a & c  (4) c & d

12. On the basis of International Society of Soil Science (ISSS), which of the following is the size of fine sand?
   (1) 0.2 – 0.02 mm
   (2) 0.025 – 0.05 mm
   (3) 0.002 – 0.0002 mm
   (4) 0.05 – 0.005 mm

13. Match List – I with List – II and select the correct answer by using codes given below:

   **List – I**                              **List – II**
   **Soil Orders**                          **Formative Elements in the name of orders**
   1. Entisols   A. ept                         1. Entisols   A. ept
   2. Vertisols   B. ent                       2. Vertisols   B. ent
   3. Inceptisols   C. ert                    3. Inceptisols   C. ert
   4. Spodosols   D. od                       4. Spodosols   D. od

   **Codes**
   (A) 1 2 3 4
   (B) 2 3 1 4
   (C) 3 1 2 4
   (D) 4 3 4 2

   02 (Agriculture)
14. कॉलम – 1 को कॉलम – 2 से सुमेलित कर नीचे दिये गये कूटों की सहायता से सही उत्तर का चयन कीजिये:

कॉलम - 1  कॉलम - 2
पोषक तत्त्व  देहिक कार्य / कमी के लक्षण
1. फास्फोरस  i. पौधों में रसायन द्रव की सहन क्षमता बढ़ाने में महत्त्वपूर्ण योगदान
2. पोटाश ii. उर्जा स्थानांतरण में सम्मिलित होता है।
3. बोरोन iii. कमी से धाम में खुदा रोग होता है।
4. जस्ता iv. परागकण्डों के बनने एवं परागकण्डी की बढ़ोतरी में महत्त्वपूर्ण योगदान

कूटः

1 2 3 4
(1) ii i iv iii
(2) i iii  ii iv
(3) iii ii  i iv
(4) iv i ii iii

15. निम्न कथनों में से कौन सा कथन मूदा निर्माणकारी प्रक्रियाओं के संदर्भ में गलत है?

(1) हूमिफिकेशन कार्बनिक पदार्थों के विच्छेदन तथा नवीन कार्बनिक पदार्थों के संलग्नक का संयुक्त प्रक्रिया है।
(2) जीव मण्डल मूदा निर्माण का संक्रमण कारक है।
(3) पोडलोनीकरण मूदा निर्माण की प्राथमिक प्रक्रिया है।
(4) पौधों पदार्थ विशाल मूदा निर्माण कारक है।

02 (Agriculture)
16. Which of the followings is not a soil texture class?
(1) Sandy
(2) Loamy sand
(3) Sandy loam
(4) Sand

17. Which one of the followings is an organic chemical fertilizer?
(1) Calcium Ammonium Nitrate (CAN)
(2) Di-Ammonium Phosphate (DAP)
(3) Urea
(4) None of these

18. Which of the following pairs related to nutrient deficiency symptoms is not correctly matched?
(1) Ca – Deficiency symptoms appear on terminal bud and it dries with time.
(2) S – Chlorosis symptoms appear on younger leaves
(3) Fe – Chlorosis symptoms appear on older leaves
(4) N – Chlorosis symptoms appear on older leaves
19. Which one of the following statements is not correct?
   (1) Rock phosphate is a water soluble fertilizer.
   (2) Single super phosphate is a water soluble fertilizer.
   (3) Triple super phosphate is an acid soluble fertilizer.
   (4) Ammonium phosphate is a water soluble fertilizer.

20. Which of the following is not a mineral horizon?
   (1) A
   (2) E
   (3) B
   (4) O

21. Which of the following is a non-edible oil cake?
   (1) Mustard cake
   (2) Mahua cake
   (3) Linseed cake
   (4) Sesame cake

22. Clustering disease is a physiological disorder of
   (1) Grapes
   (2) Mango
   (3) Sapota
   (4) Banana

23. Which variety of papaya is not a gynodioecious?
   (1) Pusa Dwarf
   (2) Surya
   (3) Pusa Majesty
   (4) Coorg Honeydew
24. ललित कौन से फल फसल की किस्म है?
   (1) अंगूर (2) अनार
   (3) अमरूद (4) लेमन

25. अकॉं कंचन के पैतृक (जनक) हैं:
   (1) अनाबे-ए-शाही × कवीन ऑफ बैनपार्ट
   (2) ब्लेक चम्पा × डोमसन सीडलेस
   (3) बैंगलोर क्लू × ब्लेक चम्पा
   (4) अंगूर क्लान × ब्लेक चम्पा

26. डिविज़न डी के पहले कौन से फल की छिलाई नहीं की जाती है?
   (1) अनानास (2) आम
   (3) भेरी (4) सेब

27. गाजर की इस्तमाल बीज दर (कि.प्र../की.) क्या है?
   (1) 4 – 5 (2) 6 – 10
   (3) 12 – 15 (4) 18 – 20

28. हाइब्रिड ‘टी’ गुलाब का व्यावसायिक प्रवर्धन निम्न में से किस विधि द्वारा किया जाता है?
   (1) दृढ़ काठ तना कलम
   (2) ‘टी’ कलिकायन
   (3) हवा दब विधि
   (4) सकर्स

24. Lalit is a variety of which fruit crop?
   (1) Grape
   (2) Pomegranate
   (3) Guava
   (4) Lemon

25. Parent of Arka Kanchan grape are
   (1) Anab-e-Shahi × Queen of Vineyard
   (2) Black Champa × Thompson Seedless
   (3) Bangalore Blue × Black Champa
   (4) Angur Kalan × Black Champa

26. Which fruit is not peeled before canning?
   (1) Pineapple (2) Mango
   (3) Cherry (4) Apple

27. What is optimum seed rate (kg/ha) of carrot?
   (1) 4 – 5 (2) 6 – 10
   (3) 12 – 15 (4) 18 – 20

28. Hybrid ‘T’ roses is commercially propagated by which of the following method?
   (1) Hard wood stem cutting
   (2) ‘T’ budding
   (3) Air layering
   (4) Suckers

02 (Agriculture)
29. In which crop a disease ‘purple blotch’ is found ?
(1) Tomato (2) Pea
(3) Cauliflower (4) Onion

30. Ruby is a variety of which crop ?
(1) Bael (2) Pomegranate
(3) Guava (4) Amla

31. Which species of rose contains maximum amount of essential oil ?
(1) Rosa multiflora
(2) Rosa bourboniana
(3) Rosa damascena
(4) Rosa chinensis

32. Pusa Mukta is variety of which crops ?
(1) Cauliflower (2) Cabbage
(3) Onion (4) Tomato

33. Damping off disease is common in which fruit crop ?
(1) Papaya (2) Mango
(3) Lime (4) Amla
34. Which one of the following is the peculiarities of Indian Agriculture?
(1) Dependence of seasonal rainfall
(2) Production of cash-crops
(3) Even distribution of land-holdings
(4) More capital investment

35. As per Economic Survey of India 2017-18, what was the level of food grain production in India for the year 2016-17.
(1) 252.02 million tonnes
(2) 251.57 million tonnes
(3) 270.05 million tonnes
(4) 275.68 million tonnes

36. According to Agriculture Census 2015-16, what percent of area under land holding has decreased in Rajasthan in the year 2015-16 in comparison to 2010-11?
(1) 1.50 percent  (2) 1.80 percent
(3) 1.24 percent  (4) 2.10 percent

37. The Minimum Support Price (MSP) of wheat for 2018-19 season has been fixed at
(1) ₹ 1840 per quintal
(2) ₹ 1745 per quintal
(3) ₹ 1635 per quintal
(4) ₹ 1640 per quintal
38. Which of the following fact is correct about the contribution of women in Indian agriculture as per Census 2011?
(1) out of total female main workers, 80 percent were agricultural labourers.
(2) 12.8 percent of the operational holding were owned by women.
(3) more than 50 percent of the operational holding were owned by women in the marginal and small holdings categories.
(4) only 20 percent of large holdings were owned by women.

39. Match List – I (Institutions) with List – II (Established Years) and select the correct answer using the codes given below the lists:

<table>
<thead>
<tr>
<th>List – I (Institutions)</th>
<th>List – II (Established Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Food Corporation of India</td>
<td>i. 1958</td>
</tr>
<tr>
<td>b. National Bank for Agriculture and Rural Development</td>
<td>ii. 1982</td>
</tr>
<tr>
<td>c. National Horticulture Board</td>
<td>iii. 1984</td>
</tr>
<tr>
<td>d. National Agricultural Cooperative Marketing Federation</td>
<td>iv. 1965</td>
</tr>
</tbody>
</table>

Codes:

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
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</thead>
<tbody>
<tr>
<td>i</td>
<td>ii</td>
<td>iii</td>
<td>iv</td>
</tr>
</tbody>
</table>

(a) (i) (ii) (iii) (iv)
(b) (iv) (ii) (iii) (i)
(c) (ii) (iii) (iv) (i)
(d) (iii) (iv) (i) (ii)

02 (Agriculture)
40. The difference between the price paid by consumers and net price received by producers for an equivalent quantity of farm produce is often known as
(1) Marketing cost
(2) Marketing efficiency
(3) Price-spread
(4) Marketing channel

41. The indirect financing to agriculture are associated with which of the following?
(1) Loans given for land reclamation
(2) Loans given for milk cattle
(3) Loans given for plant protection measures
(4) Financing the Farmer’s Service Societies (FSS)

42. The head office of NABARD is situated at
(1) Mumbai
(2) New Delhi
(3) Jaipur
(4) Chennai

43. In which year, Pradhan Mantri Fasal Bima Yojana was introduced in India?
(1) 1985
(2) 1991
(3) 2009
(4) 2016
44. Under Rashtriya Krishi Vikas Yojana, Government of India provide financial assistance to the states. From 2015-16, Government of India reduced their contribution from
   (1) 100 percent to 80 percent
   (2) 100 percent to 60 percent
   (3) 80 percent to 60 percent
   (4) 100 percent to 50 percent

45. From which district of Rajasthan, the National Rural Livelihood Mission was launched by Mrs. Sonia Gandhi on June 3, 2011?
   (1) Udaipur
   (2) Dungarpur
   (3) Bhilwara
   (4) Banswada

46. The expression of farm plan in monetary terms is called
   (1) Farm Budgeting
   (2) Farm Planning
   (3) Farm Management
   (4) Production Economics

47. Which is not a carpentry tool?
   (1) Bevel square
   (2) Cross pein hammer
   (3) Dynamometer
   (4) Rasp cut file
48. MHD devices stands for
   (1) Magneto hydro dynamic
   (2) Mini harvester device
   (3) Mono hydro diameter
   (4) Micro hydration device

49. Which one of the following statement is correct?
   (1) Subsoiler and chisel plough are used to break and satter impermeable soil layers.
   (2) Fluted rollers are important component of puddler.
   (3) Frog is a component of disc harrow.
   (4) Mould board plough is used in sandy soil.

50. Which is false statement in following?
   (1) Blade terracer is used for land levelling purpose.
   (2) Function of cultipackers is breaking of clods and packing of soil.
   (3) Puddler is used for sowing paddy in field with standing water.
   (4) Ridger is used to form ridges.

51. A Fore Sight (F.S.) is also called
   (1) Minus Sight (−S)
   (2) Plus Sight (+S)
   (3) Intermediate Sight (I.S.)
   (4) Turning Point (T.P.)
52. The vertical distance between the centre line of the pump and the point of free delivery of water is called
(1) Static head
(2) Static suction head
(3) Static discharge head
(4) Friction head

53. Basic formula for calculating the discharge through a weir is
(1) \( Q = CLH^m \)
(2) \( Q = LH^m \)
(3) \( Q = CH^m \)
(4) \( Q = CL^m \)

54. Which is false statement from the following?
(1) A chain pump is suitable to lift water to height upto 12 m from the water surface in the well, canal or stream.
(2) A centrifugal pump will not function until the pump casing is completely filled with water.
(3) Submersible pumps are suitable for installation in tubewell of diameter 10 cm or larger.
(4) Total head is sum of static head, friction head and velocity head.
55. Which is false statement in following?
   (1) Cost of maintenance of bullocks is very high due to limited use in a year.
   (2) Rate of depreciation of a tractor is 20 percent per year.
   (3) In terms of power output, one can expect 0.3 kW to 0.6 kW per animal.
   (4) On an average a farm worker can develop 0.1 horse power (HP) or 0.075 kW.

56. How many times protein content of colostrum is higher than normal milk?
   (1) 7 - 9       (2) 3 - 5
   (3) 9 - 11      (4) 12 - 14

57. Which breed of sheep is famous for carpet wool production?
   (1) Nellore      (2) Mandya
   (3) Chokla      (4) Hassan

58. In India, pashmina wool is obtained from which breed of goat?
   (1) Barbari
   (2) Black Bengal
   (3) Kuchi
   (4) Changthangi
59. The gestation period in cows is
   (1) 230 – 235 days
   (2) 280 – 285 days
   (3) 305 – 310 days
   (4) 315 – 320 days

60. How much floor space is satisfactory for an adult cow in shed?
   (1) 15 – 20 sq. ft.
   (2) 20 – 25 sq. ft.
   (3) 65 – 70 sq. ft.
   (4) 85 – 90 sq. ft.

61. What is the moisture percent of hay?
   (1) 15 – 20%
   (2) 25 – 30%
   (3) 30 – 35%
   (4) 35 – 40%

62. Foot and mouth disease in cattle and pigs is caused by
   (1) Virus
   (2) Bacteria
   (3) Flies
   (4) Fungi

63. Generally for computation of balanced ration for indigenous cattle, the dry matter is calculated at the rate of
   (1) 1 – 1.5 kg / 100 kg body weight
   (2) 2 – 2.5 kg / 100 kg body weight
   (3) 3 – 3.5 kg / 100 kg body weight
   (4) 4 – 4.5 kg / 100 kg body weight
64. Rate of milk feeding to cattle calf from birth to 3 weeks of age should be ______ of calf body weight.
   (1) 10%   (2) 1%   (3) 2.5%   (4) 20%

65. The buffaloes found in India belongs to which of the following categories?
   (1) River buffalo
   (2) Swamp buffalo
   (3) Mud buffalo
   (4) Tarai buffalo

66. Which one of the following sheep breed belongs to North Western arid and semi-arid region of India?
   (1) Ganjam
   (2) Gaddi
   (3) Chokla
   (4) Mandya

67. The disorder caused by excessive feeding of lush green fodders in cattle is
   (1) Milk fever   (2) Ketosis
   (3) Tympanitis   (4) Azoturia

68. According to Kelsey and Hearne, the basic philosophy of Extension Education is
   (1) To eradicate poverty of people.
   (2) To provide technical help to people.
   (3) To teach people how to think, not what to think.
   (4) Helping people to help themselves.

02 (Agriculture)
69. Which one of the following projects is implemented in consortium mode, with competitive funding in India?

(1) National Agricultural Technology Project
(2) National Agricultural Innovation Project
(3) Institution-Village-Linkage Programme
(4) National Agricultural Research Project

70. Which one of the following pairs is not correctly matched?

(1) Individual – Personal letter contact
(2) Group contact – Campaign
(3) Mass contact – Farmers fair
(4) Group contact – Field trip

72. First 55 Community Development Projects were organized in India for a period of

(1) Three years
(2) Five years
(3) Ten years
(4) Fifteen years
73. सूची - I को सूची - II के साथ जोड़ें एवं नीचे दी गयी सूचियों के कोड का उपयोग करते हुए सही उत्तर का चयन करें:

<table>
<thead>
<tr>
<th>सूची - I</th>
<th>सूची - II</th>
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</thead>
<tbody>
<tr>
<td>a. श्रवण साधन</td>
<td>1. नमूना</td>
</tr>
<tr>
<td>b. प्रक्षेपित दृश्य साधन</td>
<td>2. नाटक</td>
</tr>
<tr>
<td>c. अप्रक्षेपित दृश्य साधन</td>
<td>3. टेलीफोन तस्कर</td>
</tr>
<tr>
<td>d. दृश्य - श्रवण साधन</td>
<td>4. स्लाइड</td>
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कूट:

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74. कृषकों को आवश्यकता समृद्ध एवं कृषी शिक्षा सम्बन्धित व्यावसायिक प्रशिक्षण किसके द्वारा दिया जाता है?

1. प्रशिक्षण एवं भ्रमण पद्धति
2. कृषि तकनीकी सूचना केन्द्र
3. कृषि विज्ञान केन्द्र
4. जिला ग्रामीण विकास अभियान

73. Match List - I with List - II and select the correct answer by using the codes given below the lists:

<table>
<thead>
<tr>
<th>List - I</th>
<th>List - II</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Audio aid</td>
<td>1. Specimen</td>
</tr>
<tr>
<td>b. Projected</td>
<td>2. Drama visual aid</td>
</tr>
<tr>
<td>c. Non-projected</td>
<td>3. Telephone visual aid</td>
</tr>
<tr>
<td>d. Audio-visual</td>
<td>4. Slide aid</td>
</tr>
</tbody>
</table>

Codes:

<table>
<thead>
<tr>
<th></th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>(2)</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>(3)</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>(4)</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

74. Need based and Skill oriented Vocational Training is provided to the farmers through

1. Training and Visit system
2. Agricultural Technology Information Centre
3. Krishi Vigyan Kendra
4. District Rural Development Agency

02 (Agriculture)
75. भारत में लोगों के लिए निम्नलिखित रोजगार सम्बन्धी कार्यक्रम विभिन्न वर्षों में क्रियान्वित किये गये थे:

1. जवाहर रोजगार योजना (जे.आर.वाई.)
2. स्वर्णजयanti ग्राम स्वरोजगार योजना (एस.जी.एस.वाई.)
3. राष्ट्रीय ग्रामीण रोजगार गांवटी अभियान (एन.आर.ए.जी.ए.)
4. प्रधानमंत्री रोजगार योजना (पी.एम.आर.वाई.)

इन कार्यक्रमों का क्रियान्वयन वर्ष के अनुसार सही क्रांतिकारिक है:

(1) 4, 2, 3 एवं 1 (2) 2, 4, 3 एवं 1
(3) 1, 3, 2 एवं 4 (4) 1, 4, 2 एवं 3

76. निम्नलिखित में से नेतृत्व का कौन सा प्रकार "क्षाइट्र" के वर्गीकरण में समिल नहीं है?

(1) तात्तात्रीय (2) स्बूतात्रीय (3) व्यापारस्री (4) अहस्तक्षेप

77. निम्नलिखित में कौन सा एक सही बुझ नहीं है?

(1) संचार का लीजल्स - 5 तत्त्व मॉडल
(2) संचार का बेला मॉडल - 6 तत्त्व
(3) संचार का आभिलोटल - 3 तत्त्व मॉडल
(4) संचार का रोजस्क संच - 5 तत्त्व शुमेन्कर मॉडल

02 (Agriculture)
78. Development of Plan of Work is a part of
(1) Programme Planning
(2) Programme Implementation
(3) Programme Monitoring
(4) Programme Evaluation

79. Which of the following are elements of diffusion process?
1. Communication channels
2. Innovation
3. Persuasion
4. Overtime
Select the correct answer using the codes given below:
Codes:
(1) 1, 2 and 3
(2) 2, 3 and 4
(3) 1, 2 and 4
(4) 1, 3 and 4

80. Which of the following is a one dimensional diagram?
(1) Pie-chart
(2) Bar diagram
(3) Histogram
(4) Cylinder

81. The correct relationship between Arithmetic Mean (A.M.), Geometric Mean (G.M.) and Harmonic Mean (H.M.) is
(1) A.M. = G.M. = H.M.
(2) G.M. ≥ A.M. ≥ H.M.
(3) H.M. ≥ G.M. ≥ A.M.
(4) A.M. ≥ G.M. ≥ H.M.
82. The mean of 11 numbers is 7. If one of the numbers, 13 is deleted, what will be the mean of remaining 10 numbers?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>7.7</td>
<td>(2)</td>
</tr>
<tr>
<td>(3)</td>
<td>6.0</td>
<td>(4)</td>
</tr>
</tbody>
</table>

83. For \( n = 50 \), \( \sum_{i=1}^{50} (x_i - 3) = 50 \), what is the mean?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>3</td>
</tr>
<tr>
<td>(2)</td>
<td>4</td>
</tr>
<tr>
<td>(3)</td>
<td>5</td>
</tr>
<tr>
<td>(4)</td>
<td>50</td>
</tr>
</tbody>
</table>

84. Which of the following statements is true?

1. Mode is the best measure of central tendency.
2. Median is not affected by extreme values.
3. Arithmetic mean is not affected by extreme values.
4. Geometric mean can be computed even if one of the values of given data is negative.

85. Consider the following statements:

1. If 10 is added to each entry on a list, then the average increases by 10.
2. If 10 is added to each entry on a list, then the standard deviation increases by 10.
3. If each entry on a list is doubled, then the average doubles.

Which of the above statements are correct?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>1, 2 and 3</td>
</tr>
<tr>
<td>(2)</td>
<td>1 and 2 only</td>
</tr>
<tr>
<td>(3)</td>
<td>1 and 3 only</td>
</tr>
<tr>
<td>(4)</td>
<td>2 and 3 only</td>
</tr>
</tbody>
</table>
86. Mean deviation is minimum when deviation is taken from
(1) Arithmetic mean
(2) Median
(3) Mode
(4) Weighted mean

87. Which of the following statements is true?
(1) Standard deviation is square of variance.
(2) Variance is not independent of change of origin of the data.
(3) Measure of relative dispersion is coefficient of variation.
(4) Covariance is measured between more than two variables.

88. Following data are given:
Covariance between X and Y = 5
Variance of X = 4
Variance of Y = 9
The value of coefficient of correlation between X and Y will be closest to
(1) 0.75
(2) 0.90
(3) 0.60
(4) 0.80
89. In which one of the following cases, would you expect to get a negative correlation?

(1) The age of husbands and wives.
(2) Shoe size and marks obtained in Statistics.
(3) Insurance Companies profit and the number of claims they have to pay.
(4) Amount of rainfall and yield of crop.

90. The loose smut disease of wheat spreads through

(1) Soil borne sori
(2) Air borne sori
(3) Internally seed borne
(4) Externally seed borne

91. Colletotrichum spp. causes which disease in fruit plants?

(1) Blight
(2) Scab
(3) Root rot
(4) Anthracnose

92. Blight of Cumin is caused by

(1) Alternaria alternata
(2) Alternaria tennis
(3) Alternaria burnsii
(4) Xanthomonas campestris
93. The Great Irish Famine (1845-46) was due to
(1) Early blight of potato
(2) Brown rot of potato
(3) Late blight of potato
(4) Rice blast

94. Which of the following is cyst forming nematode infesting potato?
(1) Globodera rostochiensis
(2) Caenorhabditis elegans
(3) Podosphaera leucotricha
(4) Macrophomina phaseoli

95. The major disease of groundnut is
(1) Early and late leaf spot disease
(2) Canker disease
(3) Root knot disease
(4) Stem gall disease

96. Cut worm, **Agrotis ipsilon** is the pest of which crop?
(1) Gram
(2) Castor
(3) Sugarcane
(4) Pomegranate

97. Which of the following pests of sorghum and maize belongs to order “**Diptera**”?
(1) Rhopalosiphum maidis
(2) Atherigona variisococca
(3) Chilo partellus
(4) Sesamia inferens
98. Which of the following is egg-parasitoid recommended for the control of stem borer in crops?
(1) NPV
(2) Bacillus thuringiensis
(3) Trichogramma japonica
(4) Metarhizium anisopliae

99. Which is notorious pest of chickpea causing heavy damage?
(1) Helicoverpa armigera
(2) Carpomyia versuviana
(3) Meridarchis scyrophodes
(4) Leucinodes orbonalis

100. Phenyl pyrazole is present in which insecticide?
(1) Fipronil
(2) Imidocloprid
(3) Dimethoate
(4) Malathion

101. Diamond back moth attacks is found in which crops?
(1) Wheat
(2) Barley
(3) Crucifers
(4) Gram
102. The_______ is a chart or map on which distribution of selected meteorological elements over a large area, at specified instant of time is represented.
   (1) Geographical chart
   (2) Climate chart
   (3) Weather chart
   (4) Synoptic chart

103. The erosion of soil particles between 0.1 to 0.5 mm diameter by wind is termed as
   (1) Saltation
   (2) Suspension
   (3) Surface creep
   (4) Interruption

104. While classifying plant adaptation to drought, which of these is not denoted as ‘drought avoidance’ mechanism?
   (1) Early stomatal closer
   (2) Thick cuticle
   (3) Reduced leaf area
   (4) High root : top ratio

105. The seed rate (kg/ha) of multigerm varieties of sugarbeet is about
   (1) 10
   (2) 15
   (3) 20
   (4) 25

106. The ratio between the quantity of water stored in the root zone and the water delivered to the plot is termed as
   (1) Water distribution efficiency
   (2) Water storage efficiency
   (3) Water application efficiency
   (4) Project efficiency
107. A drainage canal discharges 0.3 cubic meters of water per second and drains 250 hectare area. What is the drainage coefficient of this land?
   (1) 0.04 cm  (2) 1.04 cm
   (3) 2.04 cm  (4) 3.04 cm

108. The variety ICPL 87 (Pragati) of pigeon-pea was released from
   (1) GBPUAT, Pantnagar
   (2) CCSHAU, Hisar
   (3) TNAU, Coimbatore
   (4) ICRISAT, Hyderabad

109. Which of these is an automated method of surface irrigation?
   (1) Cableigation  (2) Surge irrigation
   (3) Corrugation  (4) Level basin

110. The approximate relationship between Total Dissolved Solids (TDS) and Electrical Conductivity (EC) of waters having EC less than 5 ds/m is expressed as
   (1) TDS (mg/L) = 425 x EC (ds/m)
   (2) TDS (mg/L) = 515 x EC (ds/m)
   (3) TDS (mg/L) = 640 x EC (ds/m)
   (4) TDS (mg/L) = 720 x EC (ds/m)
111. Which of the following is not a composite of maize?
(1) Ageti 76  
(2) Navjot
(3) Prabhat  
(4) Sartaj

112. Which one of these nutrient elements is absorbed by fruiting zone of groundnut?
(1) Nitrogen  
(2) Iron  
(3) Calcium  
(4) Zinc

113. _______ is calculated in units of yield increase per unit of nutrient applied.
(1) Apparent nutrient recovery  
(2) Production efficiency  
(3) Agronomic efficiency  
(4) Physiological efficiency

114. What is the tag colour on the bag of foundation seed?
(1) Golden yellow  
(2) Blue  
(3) Green  
(4) White

115. The component herbicides of the herbicide mixture ‘Odyssey’ used to control weeds in soyabean are
(1) Imazethapyr & Pendimethalin  
(2) Imazethapyr & Imazamox  
(3) Imazethapyr & quizalafop  
(4) Imazethapyr & alachlor
116. If the grain yield of barley is 3000 kg/ha and the average ET was 30 cm, the water use efficiency (kg/m³) of barley would be

(1) 100
(2) 10
(3) 1
(4) 0.1

117. A character determined by many genes and does not show discrete variation is known as

(1) Qualitative character
(2) Threshold character
(3) Quantitative character
(4) Multiple-allelic character

118. If two plants differing for 4 allelic pairs are hybridized, the smallest perfect population in F2 will be

(1) 16
(2) 48
(3) 64
(4) 256

119. Grow-out test is conducted to determine

(1) Moisture content
(2) Germination
(3) Seed vigour
(4) Genetic purity

120. The hybrids developed by Government Agencies or Government Institutions and Agricultural Universities are called

(1) Private hybrids
(2) Institutional hybrids
(3) Public hybrids
(4) Government hybrids