

ANIMAL SCIENCES ICAR SEPT 2022

Topic:- 14 ANIMAL SCIENCES_PG

1) Adjustment of fat % and/ or SNF % of milk to a pre-determined level is known as

[Question ID = 1081][Question Description = 101_21_ASC_AUG22_Q01]

1. Homogenization [Option ID = 4321]
2. Humanization [Option ID = 4322]
3. Standardization [Option ID = 4323]
4. Transformation [Option ID = 4324]

2) What is used to separate microorganisms from milk?[Question ID = 1082][Question Description = 102_21_ASC_AUG22_Q02]

1. Pasteurizer [Option ID = 4325]
2. Bactofuge [Option ID = 4326]
3. Homogenizer [Option ID = 4327]
4. Lactometer [Option ID = 4328]

3) Overrun in ice cream should not exceed

[Question ID = 1083][Question Description = 103_21_ASC_AUG22_Q03]

1. 50% [Option ID = 4329]
2. 60% [Option ID = 4330]
3. 70% [Option ID = 4331]
4. 80% [Option ID = 4332]

4) What is correct with respect to All India Livestock Census 2019?

Statement I: Uttar Pradesh had highest no. of livestock

Statement II: In India most populous livestock species was buffalo.

In light of the above statements, choose the *correct* answer from the options given below

[Question ID = 1084][Question Description = 104_21_ASC_AUG22_Q04]

1. Both Statements I and II are true [Option ID = 4333]
2. Both Statements I and II are false [Option ID = 4334]
3. Statement I is true but Statement II is false [Option ID = 4335]
4. Statement I is false but Statement II is true [Option ID = 4336]

5) What is correct with respect to behaviour of domestic animals?

Statement I: All animals are selfish and self-centered.

Statement II: All animals are self-preserving.

In light of the above statements, choose the *most appropriate* answer from the options given below

[Question ID = 1085][Question Description = 105_21_ASC_AUG22_Q05]

1. Both Statement I and Statement II are correct [Option ID = 4337]
2. Both Statement I and Statement II are incorrect [Option ID = 4338]
3. Statement I is correct but Statement II is incorrect [Option ID = 4339]
4. Statement I is incorrect but Statement II is correct [Option ID = 4340]

6) During summer season, who behaves as 'Nocturnal Breeder'?[Question ID = 1086][Question Description = 106_21_ASC_AUG22_Q06]

1. Mare [Option ID = 4341]
2. Buffalo [Option ID = 4342]
3. Sow [Option ID = 4343]
4. Ewe [Option ID = 4344]

7) What is correct for improving economic gains in swine?

Statement I: Flushing follows breeding of females.

Statement II: Coating of ferrous sulfate solution on teats follows farrowing.

In light of the above statements, choose the *most appropriate* answer from the options given below

[Question ID = 1087][Question Description = 107_21_ASC_AUG22_Q07]

1. Both Statements I and II are correct [Option ID = 4345]
2. Both Statements I and II are incorrect [Option ID = 4346]
3. Statement I is correct but Statement II is incorrect [Option ID = 4347]
4. Statement I is incorrect but Statement II is correct [Option ID = 4348]

8) Free-martin is

[Question ID = 1088][Question Description = 108_21_ASC_AUG22_Q08]

1. Sterile female calf born co-twin with male calf [Option ID = 4349]
2. Sterile male calf born co-twin with female calf [Option ID = 4350]
3. Sterile female calf born co-twin with female calf [Option ID = 4351]
4. Filly born out of mating between mare and jack [Option ID = 4352]

9) Ponderous built, pendulous dewlap and sheath, prominent fore head, leaf like twisted long ears and red-brown coat are the most prominent features of which cattle breed?[Question ID = 1089][Question Description = 109_21_ASC_AUG22_Q09]

1. Sahiwal [Option ID = 4353]
2. Red Sindhi [Option ID = 4354]
3. Gir [Option ID = 4355]
4. Ongole [Option ID = 4356]

10) Appearance through vulva the fore limbs of fetus with chin resting on knees during calving is indicative of

[Question ID = 1090][Question Description = 110_21_ASC_AUG22_Q10]

1. Dystocia [Option ID = 4357]
2. Twinning [Option ID = 4358]
3. Still birth [Option ID = 4359]
4. Eutocia [Option ID = 4360]

11) An enclosure with dimensions of 4m length and 3m width will be most appropriate for

[Question ID = 1091][Question Description = 111_21_ASC_AUG22_Q11]

1. Calving box [Option ID = 4361]
2. Kidding pen [Option ID = 4362]
3. Lambing pen [Option ID = 4363]
4. Motorized chaffing area [Option ID = 4364]

12) The correct dental formula for Hariana bullock is -[Question ID = 1092][Question Description = 112_21_ASC_AUG22_Q12]

1. $2 \text{ (I } 3/3, \text{ C } 0/0, \text{ Pm } 3/3, \text{ M } 0/0) = 24$ [Option ID = 4365]
2. $2 \text{ (I } 0/4, \text{ C } 0/0, \text{ Pm } 3/3, \text{ M } 3/3) = 32$ [Option ID = 4366]
3. $2 \text{ (I } 3/3, \text{ C } 0/0, \text{ Pm } 3/3, \text{ M } 3/3) = 36$ [Option ID = 4367]
4. $2 \text{ (I } 3/3, \text{ C } 1/1, \text{ Pm } 3/3, \text{ M } 3/3) = 40$ [Option ID = 4368]

13) What is the correct sequence of various classes in pig husbandry?[Question ID = 1093][Question Description = 113_21_ASC_AUG22_Q13]

1. Weaner - starter - grower - finisher [Option ID = 4369]
2. Finisher - grower - weaner - starter [Option ID = 4370]
3. Starter - grower - weaner - finisher [Option ID = 4371]
4. Starter - weaner - grower - finisher [Option ID = 4372]

14) The term 'hanks' is used with reference to

[Question ID = 1094][Question Description = 114_21_ASC_AUG22_Q14]

1. Wool carbonization [Option ID = 4373]
2. Wool quality [Option ID = 4374]
3. Wool canary [Option ID = 4375]
4. Wool shrinkage [Option ID = 4376]

15) What would be the approx. dry matter requirement per day for Surti buffalo (300 kg body weight) for maintenance purpose?

[Question ID = 1095][Question Description = 115_21_ASC_AUG22_Q15]

1. 18 kg [Option ID = 4377]
2. 16 kg [Option ID = 4378]

3. 12 kg [Option ID = 4379]
4. 08 kg [Option ID = 4380]

16) Stainless steel is considered as a metal of choice for

[Question ID = 1096][Question Description = 116_21_ASC_AUG22_Q16]

1. Horse's shoe [Option ID = 4381]
2. Dairy utensils [Option ID = 4382]
3. Stanchion [Option ID = 4383]
4. Electric dehorner [Option ID = 4384]

17) An appropriate example of 'weeding' is

[Question ID = 1097][Question Description = 117_21_ASC_AUG22_Q17]

1. Docking [Option ID = 4385]
2. Castration [Option ID = 4386]
3. Dehorning [Option ID = 4387]
4. Debudding [Option ID = 4388]

18) The male having coiled horns and highest sperm concentration is

[Question ID = 1098][Question Description = 118_21_ASC_AUG22_Q18]

1. Boar [Option ID = 4389]
2. Ram [Option ID = 4390]
3. Stallion [Option ID = 4391]
4. Gelding [Option ID = 4392]

19) What is correct with respect to National Milk Day in India?

Statement I. It is celebrated on November 26 every year.

Statement II. It is celebrated on the birth anniversary of Dr.V.Kurien.

[Question ID = 1099][Question Description = 119_21_ASC_AUG22_Q19]

1. Both Statements I and II are true [Option ID = 4393]
2. Both Statements I and II are false [Option ID = 4394]
3. Statement I is true but Statement II is false [Option ID = 4395]
4. Statement I is false but Statement II is true [Option ID = 4396]

20) Which of the following animals possesses switch of tail?

[Question ID = 1100][Question Description = 120_21_ASC_AUG22_Q20]

1. Calf [Option ID = 4397]
2. Foal [Option ID = 4398]
3. Kid [Option ID = 4399]
4. Filly [Option ID = 4400]

21) Early drying-off in Jaffarabadi buffalo could be accomplished by

[Question ID = 1101][Question Description = 121_21_ASC_AUG22_Q21]

1. Incomplete milking [Option ID = 4401]
2. Liberal wallowing [Option ID = 4402]
3. Allowing calf to suckle twice a day [Option ID = 4403]
4. Improving concentrate allocation [Option ID = 4404]

22) What is correct in the following statements with respect to housing of livestock?

Statement I: Farm buildings should not modify micro-climate inside them.

Statement II: It is easy to design an ideal set of buildings to suit all regions of the country.

In light of the above statements, choose the *most appropriate* answer from the options given below

[Question ID = 1102][Question Description = 122_21_ASC_AUG22_Q22]

1. Both Statements I and II are correct [Option ID = 4405]
2. Both Statements I and II are incorrect [Option ID = 4406]
3. Statement I is correct but Statement II is incorrect [Option ID = 4407]
4. Statement I is incorrect but Statement II is correct [Option ID = 4408]

23) Which method would be appropriate to transport 200 dry Sahiwal cows from Bangalore to Amritsar during the month of October?[Question ID = 1103][Question Description = 123_21_ASC_AUG22_Q23]

1. On foot [Option ID = 4409]
2. By air [Option ID = 4410]
3. By road [Option ID = 4411]
4. By rail [Option ID = 4412]

24) Third compartment of compound stomach of ruminants is known as

[Question ID = 1104][Question Description = 124_21_ASC_AUG22_Q24]

1. Abomasum [Option ID = 4413]
2. Rumen [Option ID = 4414]
3. Omasum [Option ID = 4415]
4. Caecum [Option ID = 4416]

25) Dairy farm manager allocates maximum funds for which of the following expenditures?

[Question ID = 1105][Question Description = 125_21_ASC_AUG22_Q25]

1. Feed & fodder [Option ID = 4417]
2. Labour wages [Option ID = 4418]
3. Water & electricity [Option ID = 4419]
4. Medicines & vaccines [Option ID = 4420]

26) QTL analysis is used to [Question ID = 1106][Question Description = 126_21_ASC_AUG22_Q26]

1. identify RNA polymerase binding sites [Option ID = 4421]
2. map genes in bacterial viruses [Option ID = 4422]
3. determine which genes are expressed at a developmental stage [Option ID = 4423]
4. identify chromosomal regions associated with a trait [Option ID = 4424]

27) Assuming Hardy-Weinberg equilibrium, the genotype frequency of heterozygotes, if the frequency of two alleles at a locus are 0.7 and 0.3; will be [Question ID = 1107][Question Description = 127_21_ASC_AUG22_Q27]

1. 0.84 [Option ID = 4425]
2. 0.63 [Option ID = 4426]
3. 0.42 [Option ID = 4427]
4. 0.21 [Option ID = 4428]

28) A threshold trait [Question ID = 1108][Question Description = 128_21_ASC_AUG22_Q28]

1. is expressed on a continuous scale [Option ID = 4429]
2. is present in a few discrete classes but is influenced by both genetics and environment [Option ID = 4430]
3. is caused by only a single gene with no environmental influence [Option ID = 4431]
4. is present in very low frequency in population [Option ID = 4432]

29) Mitochondrial DNA is advantageous for evolutionary studies because [Question ID = 1109][Question Description = 129_21_ASC_AUG22_Q29]

1. it is inherited only through the female parent and allows trees of relationship to be constructed easily [Option ID = 4433]
2. it is inserted into X chromosome [Option ID = 4434]
3. it appears in humans and is not found in other animals [Option ID = 4435]
4. it evolves more slowly than the genes in nucleus [Option ID = 4436]

30) If the frequency of males affected with an X-linked recessive condition in a cattle population is 0.20, what will be the expected frequency of affected females? [Question ID = 1110][Question Description = 130_21_ASC_AUG22_Q30]

1. 0.20 [Option ID = 4437]
2. 0.0004 [Option ID = 4438]
3. 0.40 [Option ID = 4439]
4. 0.04 [Option ID = 4440]

31) A represents the dominant allele and a represents the recessive allele of a gene. If, in 2000 offspring, 1000 are aa and 1000 are of some other genotype, which of the following are most probably the genotypes of the parents? [Question ID = 1111][Question Description = 131_21_ASC_AUG22_Q31]

1. Aa and Aa [Option ID = 4441]
2. Aa and aa [Option ID = 4442]
3. AA and Aa [Option ID = 4443]
4. AA and aa [Option ID = 4444]

32) If a male with hypophosphatemia (X-linked dominant trait) marries a normal female, which of the following prediction about their potential progeny would be true? [Question ID = 1112][Question Description = 132_21_ASC_AUG22_Q32]

1. All of their sons would inherit the disease [Option ID = 4445]
2. All of their daughters would inherit the disease [Option ID = 4446]

3. About 50% of their sons would inherit the disease [Option ID = 4447]
4. About 50% of their daughters would inherit the disease [Option ID = 4448]

33) In a linear chromosome map, distance among 4 loci is 20% from a to b, 6% from a to d, 8% from b to c and 12% from a to c. What will be the crossover frequency between c and d?[Question ID = 1113][Question Description = 133_21_ASC_AUG22_Q33]

1. 12% [Option ID = 4449]
2. 6% [Option ID = 4450]
3. 9% [Option ID = 4451]
4. 3% [Option ID = 4452]

34) Given below are two statements

Statement I: According to Basic Animal Husbandry Statistics (2019), the top 5 milk producing states in India were Uttar Pradesh, Rajasthan, Madhya Pradesh, Andhra Pradesh and Gujarat.

Statement II: Top 5 milk producing states of India contributed 63.1% to total milk production in the country during 2018-2019.

In light of the above statements, choose the *most appropriate* answer from the options given below

[Question ID = 1114][Question Description = 134_21_ASC_AUG22_Q34]

1. Both Statement I and Statement II are correct [Option ID = 4453]
2. Both Statement I and Statement II are incorrect [Option ID = 4454]
3. Statement I is correct but Statement II is incorrect [Option ID = 4455]
4. Statement I is incorrect but Statement II is correct [Option ID = 4456]

35) Given below are two statements

Statement I: According to Basic Animal Husbandry Statistics (2019), the total egg production in India was 123.32 billion numbers.

Statement II: The total egg production from commercial poultry was 84.91 billion and backyard poultry was 18.41 billion numbers (Basic Animal Husbandry Statistics, 2019).

In light of the above statements, choose the *most appropriate* answer from the options given below

[Question ID = 1115][Question Description = 135_21_ASC_AUG22_Q35]

1. Both Statement I and Statement II are correct [Option ID = 4457]
2. Both Statement I and Statement II are incorrect [Option ID = 4458]
3. Statement I is correct but Statement II is incorrect [Option ID = 4459]
4. Statement I is incorrect but Statement II is correct [Option ID = 4460]

36) The population mean is proportional to gene frequency if there is[Question ID = 1116][Question Description = 136_21_ASC_AUG22_Q36]

1. no dominance [Option ID = 4461]
2. complete dominance [Option ID = 4462]
3. over dominance [Option ID = 4463]
4. partial dominance [Option ID = 4464]

37) Gain in accuracy through multiple measurements is high when repeatability is[Question ID = 1117][Question Description = 137_21_ASC_AUG22_Q37]

1. low [Option ID = 4465]
2. medium [Option ID = 4466]
3. high [Option ID = 4467]
4. very high [Option ID = 4468]

38) Individual's estimated breeding value is the product of[Question ID = 1118][Question Description = 138_21_ASC_AUG22_Q38]

1. phenotypic value and heritability [Option ID = 4469]
2. phenotypic variance and heritability [Option ID = 4470]
3. phenotypic value and genetic variance [Option ID = 4471]
4. phenotypic value and dominance variance [Option ID = 4472]

39) Selection of the parents[Question ID = 1119][Question Description = 139_21_ASC_AUG22_Q39]

1. reduces additive genetic variance in progeny [Option ID = 4473]
2. increases additive genetic variance in progeny [Option ID = 4474]
3. does not change additive genetic variance in progeny [Option ID = 4475]

4. increases additive genetic variance in sibs [Option ID = 4476]

40) Family selection is better than individual selection when phenotypic correlation is[Question ID = 1120][Question Description = 140_21_ASC_AUG22_Q40]

1. medium [Option ID = 4477]
2. high [Option ID = 4478]
3. low [Option ID = 4479]
4. very high [Option ID = 4480]

41) Inbreeding had more effect on the traits, which have[Question ID = 1121][Question Description = 141_21_ASC_AUG22_Q41]

1. low association with fitness [Option ID = 4481]
2. high association with fitness [Option ID = 4482]
3. no association with fitness [Option ID = 4483]
4. medium association with fitness [Option ID = 4484]

42) Panmictic index is[Question ID = 1122][Question Description = 142_21_ASC_AUG22_Q42]

1. 2.0 - inbreeding coefficient [Option ID = 4485]
2. 3.0 - inbreeding coefficient [Option ID = 4486]
3. 4.0 - inbreeding coefficient [Option ID = 4487]
4. 1.0 - inbreeding coefficient [Option ID = 4488]

43) Milk yield is the example of[Question ID = 1123][Question Description = 143_21_ASC_AUG22_Q43]

1. specific repetition [Option ID = 4489]
2. spatial repetition [Option ID = 4490]
3. temporal repetition [Option ID = 4491]
4. special repetition [Option ID = 4492]

44) Males are selected at an early age in[Question ID = 1124][Question Description = 144_21_ASC_AUG22_Q44]

1. juvenile MOET [Option ID = 4493]
2. adult MOET [Option ID = 4494]
3. hybrid MOET [Option ID = 4495]
4. adult and hybrid MOET both [Option ID = 4496]

45) Crossbreeding of cattle in India started with development of[Question ID = 1125][Question Description = 145_21_ASC_AUG22_Q45]

1. Taylor [Option ID = 4497]
2. Jersind [Option ID = 4498]
3. Brownsind [Option ID = 4499]
4. Sunandni [Option ID = 4500]

46) Closed nucleus breeding system has[Question ID = 1126][Question Description = 146_21_ASC_AUG22_Q46]

1. four way flow of genes [Option ID = 4501]
2. three way flow of genes [Option ID = 4502]
3. two way flow of genes [Option ID = 4503]
4. one way flow of genes [Option ID = 4504]

47) Annual expected rate of genetic improvement through progeny testing is[Question ID = 1127][Question Description = 147_21_ASC_AUG22_Q47]

1. 0.5 % [Option ID = 4505]
2. 1.5 % [Option ID = 4506]
3. 2.5 % [Option ID = 4507]
4. 3.5 % [Option ID = 4508]

48) Which of the genetic improvement path provides the highest gain?[Question ID = 1128][Question Description = 148_21_ASC_AUG22_Q48]

1. Sire to breed cow [Option ID = 4509]
2. Dam to breed bull [Option ID = 4510]
3. Sire to breed bull [Option ID = 4511]
4. Dam to breed cow [Option ID = 4512]

49) A population is under Hardy Weinberg equilibrium. If the gene frequency of A1 allele in parents is 0.30, the frequency of A2A2 genotype in progeny will be[Question ID = 1129][Question Description = 149_21_ASC_AUG22_Q49]

1. 0.30 [Option ID = 4513]
2. 0.09 [Option ID = 4514]

3. 0.42 [Option ID = 4515]
4. 0.49 [Option ID = 4516]

50) If one male from each sire's progeny and one female from each dam's progeny is chosen, the variance of family size will be[Question ID = 1130][Question Description = 150_21_ASC_AUG22_Q50]

1. 1 [Option ID = 4517]
2. positive [Option ID = 4518]
3. negative [Option ID = 4519]
4. zero [Option ID = 4520]

51) A researcher is curious about birth weight of pigs in Assam. The entire group of pigs is an example of[Question ID = 1131][Question Description = 151_21_ASC_AUG22_Q51]

1. parameter [Option ID = 4521]
2. statistic [Option ID = 4522]
3. population [Option ID = 4523]
4. sample [Option ID = 4524]

52) What is the median for the following scores:

2, 5, 4, 1, 8

[Question ID = 1132][Question Description = 152_21_ASC_AUG22_Q52]

1. 3.5 [Option ID = 4525]
2. 4.0 [Option ID = 4526]
3. 4.5 [Option ID = 4527]
4. 5.0 [Option ID = 4528]

53) A population has a mean (μ) of 35 and a standard deviation (σ) of 5. After 3 points are added to every score in the population, what are the new values for the mean and standard deviation?[Question ID = 1133][Question Description = 153_21_ASC_AUG22_Q53]

1. $\mu=35$ and $\sigma=5$ [Option ID = 4529]
2. $\mu=35$ and $\sigma=8$ [Option ID = 4530]
3. $\mu=38$ and $\sigma=5$ [Option ID = 4531]
4. $\mu=38$ and $\sigma=8$ [Option ID = 4532]

54) If the scores on a test have a mean of 26 and a standard deviation of 4, what is the z-score for a score of 18?[Question ID = 1134][Question Description = 154_21_ASC_AUG22_Q54]

1. 2 [Option ID = 4533]
2. 11 [Option ID = 4534]
3. -2 [Option ID = 4535]
4. -1.41 [Option ID = 4536]

55) Which of the following assumption(s) are required if an independent t-test is to be used?

A. Samples are drawn from a normally distributed population.

B. Homogeneity of variances (equal variances).

C. The data are either interval or ratio scales.

Choose the *correct* answer from the options given below:

[Question ID = 1135][Question Description = 155_21_ASC_AUG22_Q55]

1. A, B and C [Option ID = 4537]
2. A and B only [Option ID = 4538]
3. C only [Option ID = 4539]
4. A only [Option ID = 4540]

56) Modern chicken is[Question ID = 1136][Question Description = 156_21_ASC_AUG22_Q56]

1. *Gallus domesticus* [Option ID = 4541]
2. *Gallus gallus* [Option ID = 4542]
3. *Gallus sonneratii* [Option ID = 4543]
4. *Gallus lafayetti* [Option ID = 4544]

57) "Agro Corpex India Ltd." is responsible for domestic egg trading as well as export of eggs. This company has been formed by

[Question ID = 1137][Question Description = 157_21_ASC_AUG22_Q57]

1. TAPCO [Option ID = 4545]

2. MAFCO [Option ID = 4546]
3. NECC [Option ID = 4547]
4. NAFED [Option ID = 4548]

58) Feathers are arranged in rows within 'tract' in the skin. These tracts are separated by non-feathered spaces called [Question ID = 1138][Question Description = 158_21_ASC_AUG22_Q58]

1. Pterylae [Option ID = 4549]
2. Pneutrylae [Option ID = 4550]
3. Apterla [Option ID = 4551]
4. Pneuteria [Option ID = 4552]

59) Oviduct of chicken has five distinct parts i.e.

- A. Infundibulum
- B. Magnum
- C. Isthmus
- D. Uterus
- E. Vagina

Arrange them in increasing order of length

[Question ID = 1139][Question Description = 159_21_ASC_AUG22_Q59]

1. E, D, C, B, A [Option ID = 4553]
2. A, B, C, D, E [Option ID = 4554]
3. E, A, C, D, B [Option ID = 4555]
4. A, E, C, D, B [Option ID = 4556]

60) Read the following statements:

- A. Laying cycle includes clutch and pause
- B. Frequency with which laying and pause recurs is known as laying rhythm
- C. Each egg is laid little later in the successive day and the last egg is laid in the late afternoon, where the cycle is terminated.
- D. Laying rhythm and cycles are fairly constant

Choose the *correct* answer from the options given below:

[Question ID = 1140][Question Description = 160_21_ASC_AUG22_Q60]

1. A only [Option ID = 4557]
2. A and B only [Option ID = 4558]
3. A, B and C only [Option ID = 4559]
4. A, B, C and D [Option ID = 4560]

61) Match List I with List II

List I	List II
Common Name (Poultry)	Species
A. Guinea Fowl	I. <i>livia</i>
B. Turkey	II. <i>meleagris</i>
C. Pigeon	III. <i>anser</i>
D. Goose	IV. <i>pletyrhynchos</i>
	V. <i>gallopavo</i>

Choose the correct answer from the options given below:

[Question ID = 1141][Question Description = 161_21_ASC_AUG22_Q61]

1. A - II, B - V, C - I, D - III [Option ID = 4561]
2. A -II, B -IV, C -I, D - III [Option ID = 4562]
3. A - IV, B - II, C - III, D - I [Option ID = 4563]
4. A -V, B - II, C - I, D - III [Option ID = 4564]

62) Followings are the statements regarding selection of hatching eggs

- A. Medium sized eggs are preferred
- B. Shape of hatching eggs should be oval

C. Hatching eggs should be free from blood and meat spots

D. Shape index does not affect hatchability of eggs

Choose the *correct* answer from the options given below:

[Question ID = 1142][Question Description = 162_21_ASC_AUG22_Q62]

1. A only [Option ID = 4565]
2. A and B only [Option ID = 4566]
3. A, B and C only [Option ID = 4567]
4. A, B, C and D [Option ID = 4568]

63) Restricted feeding practices during rearing period in layers

A. Hasten sexual maturity

B. Increase intensity of egg production

C. Lower layer house mortality

D. Increase egg size

Choose the *correct* answer from the options given below:

[Question ID = 1143][Question Description = 163_21_ASC_AUG22_Q63]

1. B, C and D only [Option ID = 4569]
2. A, B and C only [Option ID = 4570]
3. C, D and B only [Option ID = 4571]
4. A, C and D only [Option ID = 4572]

64) Shell strength of an egg can be measured by[Question ID = 1144][Question Description = 164_21_ASC_AUG22_Q64]

1. Vernier Calliper [Option ID = 4573]
2. Screw Gauge [Option ID = 4574]
3. Haugh Meter [Option ID = 4575]
4. Spherometer [Option ID = 4576]

65) Following diseases may originate from hatchery contamination except[Question ID = 1145][Question Description = 165_21_ASC_AUG22_Q65]

1. New Castle Disease [Option ID = 4577]
2. Aspergillosis [Option ID = 4578]
3. Omphalitis [Option ID = 4579]
4. Staphylococcosis [Option ID = 4580]

66) The processing principle of "Khurchan" is[Question ID = 1146][Question Description = 166_21_ASC_AUG22_Q66]

1. Fermentation and heat desiccation [Option ID = 4581]
2. Fermentation and concentration [Option ID = 4582]
3. Heat desiccation and coagulation [Option ID = 4583]
4. Concentration and coagulation [Option ID = 4584]

67) 'Pantua' is prepared from following category of khoa

[Question ID = 1147][Question Description = 167_21_ASC_AUG22_Q67]

1. Pindi [Option ID = 4585]
2. Dhap [Option ID = 4586]
3. Danedar [Option ID = 4587]
4. Pinni [Option ID = 4588]

68) Fermented milk product commonly used by Sikkimese is[Question ID = 1148][Question Description = 168_21_ASC_AUG22_Q68]

1. Chura [Option ID = 4589]
2. Khamum [Option ID = 4590]
3. Churpi [Option ID = 4591]
4. Curd [Option ID = 4592]

69) 'Chakka, is an intermediate product obtained during manufacturing of[Question ID = 1149][Question Description = 169_21_ASC_AUG22_Q69]

1. Dahi [Option ID = 4593]
2. Shrikhand [Option ID = 4594]
3. Lassi [Option ID = 4595]

4. Chhach [Option ID = 4596]

70) Ghee is generally not packaged in[Question ID = 1150][Question Description = 170_21_ASC_AUG22_Q70]

1. Lacquered tin cans [Option ID = 4597]
2. Polyester coated cellophane [Option ID = 4598]
3. Food grade PVC [Option ID = 4599]
4. Aluminium foil [Option ID = 4600]

71) Following meat curing agent increases water holding capacity of muscle proteins and thereby reduces cooking loss of the products[Question ID = 1151][Question Description = 171_21_ASC_AUG22_Q71]

1. Alkaline phosphates [Option ID = 4601]
2. Ascorbates [Option ID = 4602]
3. Sodium nitrate [Option ID = 4603]
4. Sugar [Option ID = 4604]

72) Which of the followings is the wrong statement about liquid smoke?

[Question ID = 1152][Question Description = 172_21_ASC_AUG22_Q72]

1. It is non-polluting [Option ID = 4605]
2. It is free of carcinogens [Option ID = 4606]
3. It exhibits bacteriostatic or bacteriocidal effects [Option ID = 4607]
4. It checks mould formation [Option ID = 4608]

73) The fat content in 'Extra lean muscle beef product' should be less than[Question ID = 1153][Question Description = 173_21_ASC_AUG22_Q73]

1. 5 % [Option ID = 4609]
2. 10 % [Option ID = 4610]
3. 15 % [Option ID = 4611]
4. 20 % [Option ID = 4612]

74) The diameter (in micron) of fine or apparel wool fibre is[Question ID = 1154][Question Description = 174_21_ASC_AUG22_Q74]

1. less than 24.5 [Option ID = 4613]
2. 25-32 [Option ID = 4614]
3. 33-35 [Option ID = 4615]
4. 36-38 [Option ID = 4616]

75) Following 'Southern Peninsular Region' sheep breeds are maintained primarily for meat, except

[Question ID = 1155][Question Description = 175_21_ASC_AUG22_Q75]

1. Vembur [Option ID = 4617]
2. Coimbatore [Option ID = 4618]
3. Nilgiri [Option ID = 4619]
4. Ramnad white [Option ID = 4620]

76) Which among the followings is not a proximate principle?[Question ID = 1156][Question Description = 176_21_ASC_AUG22_Q76]

1. Crude protein [Option ID = 4621]
2. Calcium [Option ID = 4622]
3. Ether extract [Option ID = 4623]
4. Nitrogen free extract [Option ID = 4624]

77) Which among the followings is not a carbohydrate?

[Question ID = 1157][Question Description = 177_21_ASC_AUG22_Q77]

1. Lignin [Option ID = 4625]
2. Cellulose [Option ID = 4626]
3. Hemicellulose [Option ID = 4627]
4. Starch [Option ID = 4628]

78) Source of trypsin enzyme is

[Question ID = 1158][Question Description = 178_21_ASC_AUG22_Q78]

1. Gastric mucosa [Option ID = 4629]
2. Salivary glands [Option ID = 4630]
3. Pancreas [Option ID = 4631]
4. Small intestine [Option ID = 4632]

79) Digestible energy minus energy lost in urine and combustible gases is called

[Question ID = 1159][Question Description = 179_21_ASC_AUG22_Q79]

1. Metabolizable energy [Option ID = 4633]
2. Net energy [Option ID = 4634]
3. Gross energy [Option ID = 4635]
4. Heat of increment [Option ID = 4636]

80) What is a direct measure of the proportion of the dietary protein that can be utilised by the animal for synthesising body tissues and compounds?[Question ID = 1160][Question Description = 180_21_ASC_AUG22_Q80]

1. Ideal protein value [Option ID = 4637]
2. Biological value [Option ID = 4638]
3. Digestible crude protein value [Option ID = 4639]
4. Protein efficiency ratio [Option ID = 4640]

81) How much metabolic water (% of weight) is produced from metabolism of protein?

[Question ID = 1161][Question Description = 181_21_ASC_AUG22_Q81]

1. 20 [Option ID = 4641]
2. 40 [Option ID = 4642]
3. 60 [Option ID = 4643]
4. 80 [Option ID = 4644]

82) Zinc is a component of which antioxidant enzyme?[Question ID = 1162][Question Description = 182_21_ASC_AUG22_Q82]

1. Superoxide dismutase [Option ID = 4645]
2. Glutathione peroxidase [Option ID = 4646]
3. Glutathione reductase [Option ID = 4647]
4. Catalase [Option ID = 4648]

83) Which is the active form of vitamin E?[Question ID = 1163][Question Description = 183_21_ASC_AUG22_Q83]

1. 1,25-dihydroxycholecalciferol [Option ID = 4649]
2. α -tocopherol [Option ID = 4650]
3. Menadione [Option ID = 4651]
4. Retinol [Option ID = 4652]

84) Which of the following feed ingredients can be classified as protein feed ingredient?

[Question ID = 1164][Question Description = 184_21_ASC_AUG22_Q84]

1. Maize grains [Option ID = 4653]
2. Wheat bran [Option ID = 4654]
3. Soybean meal [Option ID = 4655]
4. Sorghum grains [Option ID = 4656]

85) Match List I with List II

List I	List II
Unconventional feed ingredients	Anti-nutritional factor
A. Castor seed meal	I. Tannins
B. Cottonseed cake	II. Mowrin
C. Tamarind seed hulls	III. Gossypol
D. Mahua seed cake	IV. Ricin

Choose the correct answer from the options given below:

[Question ID = 1165][Question Description = 185_21_ASC_AUG22_Q85]

1. A - IV, B - III, C - I, D - II [Option ID = 4657]
2. A - I, B - IV, C - II, D - III [Option ID = 4658]
3. A - II, B - I, C - III, D - IV [Option ID = 4659]
4. A - III, B - II, C - IV, D - I [Option ID = 4660]

86) The pH of very good quality silage shall be in the range of[Question ID = 1166][Question Description = 186_21_ASC_AUG22_Q86]

1. 6.5 - 7.2 [Option ID = 4661]
2. 3.5 - 4.2 [Option ID = 4662]
3. 4.8 - 6.0 [Option ID = 4663]
4. 4.2 - 4.5 [Option ID = 4664]

87) The feed of granular particle size produced from grinding of pelleted feeds is called as[Question ID = 1167][Question Description = 187_21_ASC_AUG22_Q87]

1. Mash [Option ID = 4665]
2. Crumble [Option ID = 4666]
3. Cake [Option ID = 4667]
4. Flake [Option ID = 4668]

88) Which one of the following processing methods does not require densification of feed?

[Question ID = 1168][Question Description = 188_21_ASC_AUG22_Q88]

1. Baling [Option ID = 4669]
2. Pelletizing [Option ID = 4670]
3. Block making [Option ID = 4671]
4. Roasting [Option ID = 4672]

89) How much balanced concentrate mixture (kg) should be given to a dairy cow for every one kg of milk produced?

[Question ID = 1169][Question Description = 189_21_ASC_AUG22_Q89]

1. 0.4-0.5 [Option ID = 4673]
2. 1.5-2.0 [Option ID = 4674]
3. 3.0-3.5 [Option ID = 4675]
4. 4.5-5.0 [Option ID = 4676]

90) The cells within the small intestine crypts that secrete mucus are[Question ID = 1170][Question Description = 190_21_ASC_AUG22_Q90]

1. Crypt enterocytes [Option ID = 4677]
2. Goblet cells [Option ID = 4678]
3. Enteroendocrine cells [Option ID = 4679]
4. Paneth cells [Option ID = 4680]

91) The hydration product formed during carbon dioxide transport in the blood is[Question ID = 1171][Question Description = 191_21_ASC_AUG22_Q91]

1. Acetic acid [Option ID = 4681]
2. Lactic acid [Option ID = 4682]
3. Citric acid [Option ID = 4683]
4. Carbonic acid [Option ID = 4684]

92) Right ventricular failure at high altitude in chicken leads to[Question ID = 1172][Question Description = 192_21_ASC_AUG22_Q92]

1. Emphysema [Option ID = 4685]
2. Brisket disease [Option ID = 4686]
3. Hypoxic ascites [Option ID = 4687]
4. Pneumonia [Option ID = 4688]

93) Conduction of depolarization from the surface of a muscle fiber to its inner aspects is accomplished by the[Question ID = 1173][Question Description = 193_21_ASC_AUG22_Q93]

1. Neuromuscular junction [Option ID = 4689]
2. Actin filaments [Option ID = 4690]
3. Endomysium [Option ID = 4691]
4. Sarcotubular system [Option ID = 4692]

94) What prevents movement of blood from pulmonary trunk into right ventricle during the ventricular relaxation?

[Question ID = 1174][Question Description = 194_21_ASC_AUG22_Q94]

1. Tricuspid valve [Option ID = 4693]
2. Pulmonary valve [Option ID = 4694]
3. Mitral valve [Option ID = 4695]
4. Aortic valve [Option ID = 4696]

95) The most efficient means of heat loss during exercise is[Question ID = 1175][Question Description = 195_21_ASC_AUG22_Q95]

1. Evaporation [Option ID = 4697]
2. Convection [Option ID = 4698]
3. Conduction [Option ID = 4699]
4. Radiation [Option ID = 4700]

96) Which of the following vitamins is required for the formation of prothrombin and blood clotting?

[Question ID = 1176][Question Description = 196_21_ASC_AUG22_Q96]

1. Retinol [Option ID = 4701]
2. 1,25-dihydroxycholecalciferol [Option ID = 4702]
3. Menaquinone [Option ID = 4703]
4. Alpha tocopherol [Option ID = 4704]

97) Humoral immunity is produced by[Question ID = 1177][Question Description = 197_21_ASC_AUG22_Q97]

1. Cytotoxic T cells [Option ID = 4705]
2. B cells [Option ID = 4706]
3. Memory T cells [Option ID = 4707]
4. Helper T cells [Option ID = 4708]

98) Placenta of dog and cat is[Question ID = 1178][Question Description = 198_21_ASC_AUG22_Q98]

1. Diffuse placenta [Option ID = 4709]
2. Discoidal placenta [Option ID = 4710]
3. Cotyledonary placenta [Option ID = 4711]
4. Zonary placenta [Option ID = 4712]

99) Time of ovulation in mare is[Question ID = 1179][Question Description = 199_21_ASC_AUG22_Q99]

1. 1-2 days before end of estrus [Option ID = 4713]
2. 10-15 hours after end of estrus [Option ID = 4714]
3. 30-36 hours after onset of estrus [Option ID = 4715]
4. 12-24 hours before end of estrus [Option ID = 4716]

100) The principal nitrogenous constituent of mammalian urine is[Question ID = 1180][Question Description = 200_21_ASC_AUG22_Q100]

1. Amino acids [Option ID = 4717]
2. Uric acid [Option ID = 4718]
3. Urea [Option ID = 4719]
4. Ammonia [Option ID = 4720]

101) Arrange the following steps of Extension Education Programme Planning in correct sequence:

- A. Determination of objectives and goals
- B. Identification of problems
- C. Analysis of situation
- D. Reconsideration and revision of programme
- E. Collection of facts
- F. Evaluation of progress
- G. Follow through plan of work and calendar of operations
- H. Developing plan of work and calendar of operations

Choose the *correct* answer from the options given below

[Question ID = 1181][Question Description = 201_21_ASC_AUG22_Q101]

1. B, C, E, A, H, G, D, F [Option ID = 4721]
2. E, C, B, A, H, G, F and D [Option ID = 4722]
3. B, E, C, A, H, G, D and F [Option ID = 4723]
4. E, B, C, A, H, D, F, G [Option ID = 4724]

102) Select the correct statement(s) from the followings:

- A. Parametric test is known as distribution-free test
- B. Parametric test is useful when the sample size is large and it comes from the population having normal distribution
- C. Examples of non-parametric tests are t-test, z- test, ANOVA
- D. Correlation coefficient (rho) is a non-parametric test

Choose the *correct* answer from the options given below:

[Question ID = 1182][Question Description = 202_21_ASC_AUG22_Q102]

1. B and C only [Option ID = 4725]

2. A and B only [Option ID = 4726]
3. A and C only [Option ID = 4727]
4. B and D only [Option ID = 4728]

103) Match the List I with List II

List I	List II
Program/ Organization	Place
A. Marthandam project	I. Sundarban (Bengal)
B. Rural Reconstruction Scheme	II. Mayapur (Madras)
C. Servant of Indian Society	III. Travancore
D. Gurgaon project	IV. Shantiniketan
E. Rural Reconstruction Institute	V. Punjab

Choose the correct answer from the options given below:

[Question ID = 1183][Question Description = 203_21_ASC_AUG22_Q103]

1. A -III, B -I, C -V, D - II, E-IV [Option ID = 4729]
2. A -II, B -III, C - V, D - IV, E-I [Option ID = 4730]
3. A - II, B - III, C - V, D -I, E-IV [Option ID = 4731]
4. A - III, B - I, C -II, D - V, E-IV [Option ID = 4732]

104) When did ATMA scaled throughout the country?

[Question ID = 1184][Question Description = 204_21_ASC_AUG22_Q104]

1. 1998 [Option ID = 4733]
2. 2005 [Option ID = 4734]
3. 2007 [Option ID = 4735]
4. 2009 [Option ID = 4736]

105) Select the distribution in which value of the mean is maximum, mode is least and the median lies between mean and mode

[Question ID = 1185][Question Description = 205_21_ASC_AUG22_Q105]

1. Symmetrical distribution [Option ID = 4737]
2. Positively skewed distribution [Option ID = 4738]
3. Negatively skewed distribution [Option ID = 4739]
4. Bimodal distribution [Option ID = 4740]

106) Match List I with List II

List I	List II
Item	Description
A. Data Mining	I. Used to combine various activities of the organisation to manage business efficiently
B. Artificial Neural Network	II. To assist analyst to find pattern and relationship of the data collected
C. Geographic Information System	III. Satellite based global navigation system
D. Enterprise Resource Planning	IV. To develop tools capable of performing cognitive functions like reasoning and learning
E. Global Positioning System	V. Designed to capture, store, analyse, manipulate, manage and present geographical data

Choose the correct answer from the options given below:

[Question ID = 1186][Question Description = 206_21_ASC_AUG22_Q106]

1. A -II, B -IV, C -V, D - I, E-III [Option ID = 4741]
2. A -III, B -II, C -V, D - I, E-IV [Option ID = 4742]
3. A -IV, B - I, C - V, D -II, E-III [Option ID = 4743]
4. A - II, B - I, C - V, D - IV, E-III [Option ID = 4744]

107) Match the typology of social changes with their description

List I	List II
Typology	Description
A. Amelioration	I. Subordinate groups demanding justice
B. Separatism	II. Benefits the section of disadvantaged people with intention
C. System justification theory	III. Change for the dominant groups in social system

D. Regressive social change	IV. Exclusion of a section in social change decision making process
E. Desired inclusiveness	V. Bringing amendments and reforms in system through procedural justice

Choose the correct answer from the options given below:

[Question ID = 1187][Question Description = 207_21_ASC_AUG22_Q107]

1. A - V, B - IV, C - I, D - III, E - II [Option ID = 4745]
2. A - II, B - I, C - IV, D - III, E - V [Option ID = 4746]
3. A - V, B - IV, C - I, D - II, E - III [Option ID = 4747]
4. A - IV, B - II, C - I, D - III, E - V [Option ID = 4748]

108) Match the following mixed method designs used in statistics with their descriptions

List I	List II
Design	Description
A. Explanatory research design	I. Any of the mixed method used under a unique framework
B. Convergent parallel design	II. Qualitative data is collected first
C. Exploratory sequential design	III. Quantitative data is collected first
D. Transformative design	IV. Both qualitative and quantitative data are collected but only one set is used for supporting data
E. Multiphase design	V. One problem is studied through a series of separate studies
F. Embedded design	VI. Both qualitative and quantitative data are collected simultaneously

Choose the correct answer from the options given below:

[Question ID = 1188][Question Description = 208_21_ASC_AUG22_Q108]

1. A - III, B - VI, C - II, D - I, E - V, F - IV [Option ID = 4749]
2. A - II, B - IV, C - V, D - III, E - I, F - VI [Option ID = 4750]
3. A - VI, B - II, C - IV, D - III, E - V, F - I [Option ID = 4751]
4. A - I, B - III, C - VI, D - II, E - IV, F - V [Option ID = 4752]

109) Which state became the first to implement Panchayati Raj System in India on trial basis?

[Question ID = 1189][Question Description = 209_21_ASC_AUG22_Q109]

1. Rajasthan [Option ID = 4753]
2. Andhra Pradesh [Option ID = 4754]
3. Maharashtra [Option ID = 4755]
4. Uttar Pradesh [Option ID = 4756]

110) Which of the following statements are not true with regard to multivariate methods of data analysis?

- A. Structural equation model with latent variables is exploratory type of multivariate analysis
- B. Discriminant analysis may be exploratory or confirmatory in nature
- C. Logit choice model is a multivariate method of data analysis
- D. ANOVA is a special case of canonical correlation with discrete Y variable
- E. Canonical correlation explains co-variation between two sets of multiple variables

Choose the *correct* answer from the options given below:

[Question ID = 1190][Question Description = 210_21_ASC_AUG22_Q110]

1. A and E only [Option ID = 4757]
2. A and D only [Option ID = 4758]
3. A, B and C only [Option ID = 4759]
4. C, D and E only [Option ID = 4760]

111) Which of the following statements is not true about the average fixed cost (AFC) of the milk production?[Question ID = 1191][Question Description = 211_21_ASC_AUG22_Q111]

1. AFC varies for each level of output [Option ID = 4761]
2. AFC continues to decline with increase in output level [Option ID = 4762]
3. AFC is equal to total fixed cost when output is zero [Option ID = 4763]
4. AFC can be negative beyond a certain point of investment in dairy farming [Option ID = 4764]

112) The law of diminishing marginal utility is applicable only when[Question ID = 1192][Question Description = 212_21_ASC_AUG22_Q112]

1. the units consumed are heterogeneous [Option ID = 4765]
2. the commodity units are homogeneous, being consumed continuously and reasonably large in volume and size e.g. cup(s) of milk not a spoon or few drops [Option ID = 4766]
3. the consumer keeps consuming unlimited units normally irrespective of any sense [Option ID = 4767]
4. additional utility goes on increasing with an increase in total utility [Option ID = 4768]

113) Which of the followings is correctly defining the economic term?

[Question ID = 1193][Question Description = 213_21_ASC_AUG22_Q113]

1. All money is wealth but all wealth may not be money [Option ID = 4769]
2. All types of wealth are capital but all capital are not necessarily wealth [Option ID = 4770]
3. The law of supply does not hold good under constant technology and cost structures [Option ID = 4771]
4. Huge mountains, rivers etc. that cross the boundaries of countries are considered as a national wealth [Option ID = 4772]

114) Trading of livestock products like milk powder, egg powder, meat, wool, leather etc. constitute[Question ID = 1194]

[Question Description = 214_21_ASC_AUG22_Q114]

1. national market [Option ID = 4773]
2. regional market [Option ID = 4774]
3. local market [Option ID = 4775]
4. world market [Option ID = 4776]

115) Dairy farming along with poultry farming and fisheries on the same agricultural land is a good example of[Question ID = 1195][Question Description = 215_21_ASC_AUG22_Q115]

1. competitive enterprises [Option ID = 4777]
2. supplementary enterprises [Option ID = 4778]
3. complementary enterprises [Option ID = 4779]
4. antagonistic enterprises [Option ID = 4780]

116) Relationship between marginal product (MP) and corresponding marginal cost (MC) is relevant when[Question ID = 1196][Question Description = 216_21_ASC_AUG22_Q116]

1. MP is at the maximum and MC is at the lowest point [Option ID = 4781]
2. MP is increasing and MC is also increasing [Option ID = 4782]
3. MP is decreasing and MC is also decreasing [Option ID = 4783]
4. MP is increasing and the MC becomes negative [Option ID = 4784]

117) Which of the followings is NOT the name of production possibility curve?

[Question ID = 1197][Question Description = 217_21_ASC_AUG22_Q117]

1. Transformation function [Option ID = 4785]
2. Opportunity curve [Option ID = 4786]
3. Iso-resource curve [Option ID = 4787]
4. Philip curve [Option ID = 4788]

118) Which of the followings is a preventive measure against risk and uncertainty in livestock production?[Question ID = 1198][Question Description = 218_21_ASC_AUG22_Q118]

1. Specialization [Option ID = 4789]
2. Diversification [Option ID = 4790]
3. Jhoom cultivation [Option ID = 4791]
4. Ranching [Option ID = 4792]

119) Where is the head quarter of World Trade Organization?[Question ID = 1199][Question Description = 219_21_ASC_AUG22_Q119]

1. Chicago [Option ID = 4793]
2. Geneva [Option ID = 4794]
3. New York [Option ID = 4795]
4. Tokyo [Option ID = 4796]

120) Match List I with List II

List I	List II
Particular	Description
A. Marketing efficiency of channel	I. A process of decision making by consumer to purchase goods and services
B. Rewards of production	II. Production activities of person(s) to exchange goods and/ or services undertaken for income and profit making
C. APMC markets	III. Rent, wage, interest, profit

D. Consumer behavior	IV. Producer's share in consumer's rupee
E. Agribusiness	V. Regulated legal markets under the control of state/ central government

Choose the correct answer from the options given below:

[Question ID = 1200][Question Description = 220_21_ASC_AUG22_Q120]

1. A - I, B - II, C - III, D - IV, E - V [Option ID = 4797]
2. A - I, B - II, C - IV, D - V, E - III [Option ID = 4798]
3. A - V, B - IV, C - III, D - II, E - I [Option ID = 4799]
4. A - IV, B - III, C - V, D - I, E - II [Option ID = 4800]