

**IBPS SO AGRICULTURAL FIELD OFFICER (SCALE I) MAINS  
YEAR: 2014**

**Q1.** Which is best milk producing breed of cow in India?

- (a) Sindhi
- (b) Malwi
- (c) Haryana
- (d) Sahiwal
- (e) Tharparkar

**Q2.** Which is best wool yielding sheep?

- (a) Southdown
- (b) Rambouillet
- (c) Dorper
- (d) Suffolk
- (e) Merino (Spain native)

**Q3.** Which is seedless variety of grapes?

- (a) Sharad seedless
- (b) Anab-e-Shahi
- (c) Bangalore Blue
- (d) Kali Saheb
- (e) Perlette

**Q4.** In hilly area which type farming adopted?

- (a) Ley Cropping
- (b) Contour farming
- (c) Alley Cropping
- (d) Shifting cultivation
- (e) All of these

**Q5.** Red soil has?

- (a) Poor drainage capacity
- (b) Potash-rich and potassium-Low.
- (c) High drainage capacity
- (d) Very High Drainage capacity
- (e) Medium drainage capacity

**Q6.** Planting spacing of Kabuli Chana?

- (a) 40 x 15 cm
- (b) 50 x 15 cm
- (c) 30 x 15 cm
- (d) 30 x 20 cm
- (e) 30 x 45 cm

**Q7.** Nitrogen content in vermicompost?

- (a) 3%
- (b) 5%
- (c) 7%
- (d) 10%
- (e) 15%

**Q8.** Where is CFMT&TI situated?

- (a) Lucknow
- (b) Hyderabad
- (c) Bangalore
- (d) New Delhi
- (e) Budni (Bhopal)

**Q9.** The planting spacing in sunflower is?

- (a) 40 x 15cm
- (b) 50 x 15cm
- (c) 30 x 20cm
- (d) 30 x 45cm
- (e) 30 x 15 cm

**Q10.** Plant part used frequently for production?

- (a) Ex plant
- (b) Low Plant
- (c) Flower
- (d) Leaf
- (e) None of these

**Q11.** What is the sowing time for Kharif (Rainy) Maize?

- (a) 15 July to 30 July
- (b) 15 Jan to 15 March
- (c) 15 June to 15 July
- (d) 15 Aug to 15 sept
- (e) 15 July to 15 August

**Q12.** Yellow color of soil is due to?

- (a) Iron
- (b) Silica
- (c) Zinc
- (d) Cobalt
- (e) Manganese

**Q13.** Red color of soil due to?

- (a) FeO
- (b)  $\text{CuSO}_4$
- (c)  $\text{H}_2\text{SO}_4$
- (d)  $\text{ZnSO}_4$
- (e) None of these

**Q14.** Contribution of Indian agriculture in world trade is?

- (a) Approx 1%
- (b) Approx 3%
- (c) Approx 5%
- (d) Approx 10%
- (e) Approx 15%

**Q15.** Isolation distance in cotton Foundation seed?

- (a) 50 m
- (b) 30 m
- (c) 75 m
- (d) 100 m
- (e) 200 m

**Q16.** Seed rate of winter pigeon pea is?

- (a) 25-30kg
- (b) 12-15 kg
- (c) 15-20kg
- (d) 05-10kg
- (e) None of these

**Q17.** Non environmental physical character of soil?

- (a) pH
- (b) Water
- (c) Air
- (d) Humus
- (e) Sunlight

**Q18.** What is the cropping intensity in India?

- (a) 138
- (b) 170
- (c) 150
- (d) 175
- (e) 200

**Q19.** More availability of calcium and magnesium at PH?

- (a) 6-7.5
- (b) 7.5- 8.5
- (c) 8.5-10
- (d) 3.5-5
- (e) All of these

**Q20.** Which instrument is used in secondary tillage?

- (a) Harrow
- (b) Dibbler
- (c) Plough
- (d) Spade
- (e) Rotavator

**Q21.** Which is internal seed borne disease?

- (a) Karnal burnt
- (b) Black smut
- (c) Powdery Mildew
- (d) Loose smut
- (e) All of these

**Q22.** Seed treatment for loose smut?

- (a) Thiram
- (b) Carboxin
- (c) Vitavax
- (d) Alachlor
- (e) None of these

**Q23.** What are Aldicarb and Forete?

- (a) Contact Poison
- (b) Translocate Poison
- (c) Systemic poison
- (d) Nonsystematic poison
- (e) All of these

**Q24.** For making sandy soil compact?

- (a) Conserve water
- (b) Mixe Lime
- (c) Mixe fertilizer
- (d) making ditch
- (e) None Of these

**Q25.** Which nitrogen fixation is Symbiosis?

- (a) PSB
- (b) VAM
- (c) Rhizobium
- (d) Actinomycities
- (e) All of these

**Q26.** Water use efficiency in drip irrigation?

- (a) 70%
- (b) 75%
- (c) 40%
- (d) 80%
- (e) 90%

**Q27.** Which crop sensitive for saline soil?

- (a) Wheat
- (b) Lentil
- (c) Potato
- (d) Soyabean
- (e) All of these

**Q28.** Carbon content in humus?

- (a) 40%
- (b) 58%
- (c) 70%
- (d) 75%
- (e) 80%

**Q29.** Which poultry breed native USA?

- (a) Asil
- (b) Leghorn
- (c) Bushra
- (d) Kadaknath
- (e) Rhode Island Red

**Q30.** Relative humidity major by which instrument?

- (a) Thermometer
- (b) Psychrometer
- (c) Galvanometer
- (d) Anemometer
- (e) None of these

**Q31.** What is the seed rate of winter pigeon pea?

- (a) 10-15kg/ha
- (b) 22-25 kg/ha
- (c) 25-30 kg/ha
- (d) 15-20 kg/ha
- (e) 35-40kg/ha

**Q32.** Which crop grown in more water and low oxygen?

- (a) Gram
- (b) Lentil
- (c) Paddy
- (d) Wheat
- (e) Soyabean

**Q33.** Which is largest fruit producing state in India?

- (a) Punjab
- (b) Gujrat
- (c) U.P.
- (d) M.P.
- (e) A.P

**Q34.** Which is shallow root crop?

- (a) Lentil
- (b) Onion
- (c) Gram
- (d) Sugarcane
- (e) All of these

**Q35.** Which is balanced NPK ratio in cereal crop?

- (a) 1:02:03
- (b) 7:08:09
- (c) 1:05:00
- (d) 4:02:01
- (e) None of these

**Q36.** National agricultural insurance scheme started in?

- (a) 1999
- (b) 2000
- (c) 2005
- (d) 2008
- (e) 2012

**Q37.** Which crop period miss match?

- (a) 90-100Days Soyabean
- (b) 75Days Lentil
- (c) Berseem 200 days
- (d) 110-120 Days Wheat
- (e) All are correct

**Q38.** Black color soil rich in?

- (a) Zinc
- (b) Nitrogen
- (c) Phosphorus
- (d) Calcium carbonate magnesium potassium
- (e) All of these

**Q39.** Brown color of soil due to?

- (a) Humus
- (b) Iron oxide
- (c)  $ZnSO_4$
- (d) Organic matter and manganese dioxide
- (e) All of these

**Q40.** Mismatch breed and fat %?

- (a) Holistrian friesian - (4%fat in HF milk)
- (b) Jersey 5.2%Fatt
- (c) Mutamar 13%
- (d) Bhadawari 13%
- (e) All are correct

## Solutions

### S1. Ans.(d)

**Sol.** Sahiwal is considered one of the best milk-producing breeds of cows in India.

### S2. Ans.(e)

**Sol.** Merino sheep, native to Spain, are renowned for their high-quality wool production.

### S3. Ans.(a)

**Sol.** **Sharad Seedless** is a specific variety of grapes known for being seedless. Seedless grapes are popular among consumers due to their convenience and improved eating experience. Sharad Seedless grapes are cultivated for their sweet taste and the absence of seeds, making them easy to consume without the need to spit out seeds.

### S4. Ans.(b)

**Sol.** Contour farming is a land cultivation technique that is particularly suitable for hilly or sloping terrain. The main principle of contour farming is to plow and plant crops along the contour lines of the land, i.e., the lines that run parallel to the elevation contour of the slope. This method helps in reducing soil erosion, conserving water, and improving overall soil health.

### S5. Ans.(a)

**Sol.** Red soil is a type of soil that is characterized by its reddish color, which is primarily due to the presence of iron oxide. Here's an explanation of why red soil is associated with poor drainage capacity:

1. **Composition:** Red soils are often formed in areas with a tropical climate that experiences high temperatures and heavy rainfall. The iron in the soil undergoes oxidation, leading to the development of iron oxide or rust, which imparts the characteristic red color to the soil.
2. **Clay Content:** Red soils typically have a high percentage of clay. Clay soils have small particles that pack closely together, leaving little space for water to pass through. This compact structure contributes to poor drainage.
3. **Water Retention:** Due to the fine particles and high clay content, red soils have good water retention capacity. While this can be beneficial for plants during dry periods, it also means that excess water may be retained in the soil, leading to poor drainage.
4. **Impaired Aeration:** Poor drainage in red soils can result in waterlogged conditions, which, in turn, can lead to reduced aeration in the soil. Plant roots require oxygen for respiration, and waterlogged conditions can limit the availability of oxygen, adversely affecting plant growth.
5. **Nutrient Leaching:** In poorly drained soils, nutrients may leach away more slowly, leading to the accumulation of certain minerals in the soil. However, this does not necessarily mean that red soils are rich in all essential nutrients. They may still have imbalances and deficiencies in certain elements.

### S6. Ans.(c)

**Sol.** Kabuli Chana, also known as chickpea or garbanzo bean (*Cicer arietinum*), is a pulse crop that is widely cultivated for its edible seeds. The planting spacing is a crucial factor in determining plant density and overall crop yield. In this case, the recommended spacing for Kabuli Chana is 30 x 15 cm.

### S7. Ans.(a)

**Sol.** The nitrogen content in vermicompost is typically around: (a) 3%

Vermicompost is a nutrient-rich organic fertilizer produced through the decomposition of organic material by earthworms. The nitrogen content in vermicompost can vary depending on the feedstock (initial organic material) and the conditions under which vermicomposting takes place.

Vermicompost is rich in NKP (nitrogen 2-3%, potassium 1.85-2.25% and phosphorus 1.55-2.25%), micronutrients, beneficial soil microbes and also contain 'plant growth hormones & enzymes'.

**S8. Ans.(e)**

**Sol.** CFMT&TI, which stands for Central Farm Machinery Training & Testing Institute, is located in Budni, near Bhopal.

**S9. Ans.(e)**

**Sol.** The recommended planting spacing for sunflowers is typically expressed as the distance between rows and the distance between individual plants within a row. In the given options, "30 × 15 cm" refers to planting the sunflowers with a row spacing of 30 centimeters and a plant spacing of 15 centimeters within the row.

**S10. Ans.(a)**

**Sol.** An explant is a plant part that is removed from the plant and used to initiate tissue culture. It serves as the starting material for the production of new plants through techniques like tissue culture or micropropagation. Explants can be taken from various plant parts, including stems, leaves, roots, or other tissues.

**S11. Ans.(b)**

**Sol.** The sowing of summer or rainy-season maize is carried out between January and March. The seeds are sown in the furrows formed with the tilled organic material where there is a higher concentration of humidity.

**S12. Ans.(a)**

**Sol.** Red, yellow, grey and bluish-grey colours result from iron in various forms. Under average conditions of air and moisture, iron forms a yellow oxide imparting a yellow colour to the soil. Where soils are well draining or under dry conditions, iron forms red oxides imparting a red colour to the soil.

**S13. Ans.(a)**

**Sol.** Red soil is red in color because of high content of Iron Oxide (FeO).

**S14. Ans.(a)**

**Sol.** The contribution of Indian agriculture to world trade is approximately 1%.

**S15. Ans.(a)**

**Sol.** In India, a minimum isolation distance of fifty meters for foundation seed class and thirty meters for certified seed class production from fields of other varieties of the same species, other species and fields of the same variety not conforming to variety purity requirements for certification is mandatory.

**S16. Ans.(b)**

**Sol.** The seed rate refers to the quantity of seeds that is recommended or required to sow a specific area, and it is an essential factor in achieving optimal crop density and yield. In the case of winter pigeon pea, the recommended seed rate is 12-15 kg per hectare.



**S17. Ans.(a)**

**Sol.** The pH of soil is a measure of its acidity or alkalinity. It is a crucial non-environmental physical characteristic because it indicates the concentration of hydrogen ions in the soil solution. The pH scale ranges from 0 to 14, where pH 7 is neutral. Values below 7 indicate acidity, and values above 7 indicate alkalinity.

**S18. Ans.(a)**

**Sol.** Cropping intensity is a measure of the intensity of agricultural land use. It is defined as the ratio of the gross cropped area to the net sown area.

India had a cropping intensity of 138% in the year 2013-2014.

As per latest reports (Annual report 2022-23, Department of Agriculture & Farmers Welfare, Ministry of Agriculture & Farmers Welfare, GOI), cropping intensity of India is around 141%.

**S19. Ans.(b)**

**Sol.** Calcium and magnesium availability is influenced by the pH (acidity or alkalinity) of the soil. The pH of the soil affects the solubility and mobility of various nutrients, including calcium and magnesium. More availability of calcium and magnesium occurs in the pH range of 7.5-8.5:

**S20. Ans.(a)**

**Sol.** Secondary tillage involves working the soil after primary tillage (which usually includes plowing) to create a suitable seedbed for planting. Harrow is a commonly used implement in secondary tillage.

**S21. Ans.(d)**

**Sol. Loose smut of barley and wheat are internally seed-borne** and carried as a small colony of fungus inside the seed embryo rather than as spores on the seed coat.

**S22. Ans.(b)**

**Sol.** The correct option is (b) Carboxin. Loose smut is a fungal disease that affects cereal crops, particularly wheat and barley. Seed treatment is a common method to control loose smut. Carboxin is a fungicide that is often used for seed treatment to control various fungal diseases, including loose smut in cereals. Carboxin interferes with the energy production process in the fungal cells, leading to their death.

**S23. Ans.(c)**

**Sol.** The correct option is (c) Systemic poison. Aldicarb and Forete are both systemic pesticides, which means they are absorbed by the plant and translocated within its vascular system.

Systemic pesticides can be further categorized into two types:

Local Systemic: These pesticides are absorbed and translocated only in the localized area where the application is made.

Systemic: These pesticides move within the entire plant, providing protection to various parts of the plant.

**S24. Ans.(a)**

**Sol.** The correct option is (a) Conserve water. Sandy soils have large particles and low cohesion, making them prone to poor water retention and low compaction. To make sandy soil more compact, conserving water is a suitable practice. Adequate water management helps improve soil structure and increases the cohesion between soil particles. When water is applied judiciously, it promotes better compaction by allowing the soil particles to come into closer contact and reducing the tendency of sandy soil to remain

loose and porous. Conserving water also contributes to the formation of aggregates, enhancing the overall structure of the soil.

**S25. Ans.(c)**

**Sol.** The correct option is (c) Rhizobium. Rhizobium is a type of bacteria that forms a symbiotic relationship with leguminous plants. This symbiosis is a form of nitrogen fixation. The bacteria colonize the root nodules of leguminous plants, such as peas, beans, and clover, and in return, the plants provide the bacteria with sugars. The rhizobia have the ability to fix atmospheric nitrogen into a form that the plants can use for their growth.

**S26. Ans.(e)**

**Sol.** The correct option is (e) 90%. Drip irrigation is known for its efficiency in water use. It provides water directly to the root zone of plants, minimizing evaporation and runoff. This targeted application of water contributes to high water use efficiency.

A water use efficiency of 90% indicates that 90% of the water supplied through drip irrigation is effectively utilized by the plants for their growth and development. This makes drip irrigation one of the most efficient irrigation methods.

**S27. Ans.(c)**

**Sol. The correct option is (c) Potato.** Saline soils have a high concentration of soluble salts, which can adversely affect the growth of many crops. Among the given options, potatoes are known to be sensitive to saline soil conditions. Salinity can impact the water uptake and nutrient absorption by the plants, leading to reduced crop yield and quality.

**S28. Ans.(b)**

**Sol. The correct option is (b) 58%.** Humus is the organic component of soil, formed by the decomposition of plant and animal material. The carbon content in humus can vary, but it is generally around 58%. This carbon comes from the organic matter that undergoes decomposition processes in the soil.

**S29. Ans.(e)**

**Sol. The correct option is (e) Rhode Island Red.** Rhode Island Red is a poultry breed that originated in the United States. It is a popular breed known for its egg-laying capabilities and is widely used for both meat and egg production. The breed was developed in the late 19th century in Rhode Island, making it native to the USA.

**S30. Ans.(b)**

**Sol.** The correct option is (b) Psychrometer. A hygrometer is an instrument used to measure relative humidity. A psychrometer is an example of a hygrometer. A psychrometer uses two thermometers to measure relative humidity, one measures the dry-bulb temperature, and the other measures the wet-bulb temperature.

**S31. Ans.(b)**

**Sol. The correct option is (b) 22-25 kg/ha.** The seed rate for winter pigeon pea is typically recommended to be in the range of 22-25 kg per hectare. This rate is an agronomic recommendation specifying the amount of seed to be sown per hectare of land to achieve optimal plant population and crop development.

**S32. Ans.(c)**

**Sol. The correct option is (c) Paddy.** Paddy, also known as rice, is a crop that is typically grown in flooded or waterlogged conditions. It is a semi-aquatic plant, and the flooded fields where paddy is cultivated provide an environment with more water but low oxygen availability in the soil. This unique method of cultivation, known as "paddy or rice cultivation," is adapted to the anaerobic conditions required for the germination and growth of rice plants.

**S33. Ans.(e)**

**Sol.** Estimated fruit production volume in India FY 2022, by leading state. Andhra Pradesh produced the largest volume of fruits in India, accounting for 19 million metric tons in financial year 2022.

**S34. Ans.(b)**

**Sol. The correct option is (b) Onion.** Onions are considered shallow-rooted crops, meaning that their root systems don't penetrate very deeply into the soil. Instead, they tend to spread out horizontally near the soil surface. Shallow-rooted crops are more dependent on the top layer of soil for water and nutrients.

**S35. Ans.(d)**

**Sol. The correct option is (d) 4:02:0.** A balanced NPK (Nitrogen, Phosphorus, and Potassium) ratio for cereal crops is often recommended for optimal growth and development. The ratio of 4:02:01 represents a balanced proportion of these essential nutrients.

Nitrogen (N) is represented by the first number (4).

Phosphorus (P) is represented by the second number (02).

Potassium (K) is represented by the third number (01).

**S36. Ans.(a)**

**Sol.** The present crop insurance scheme, i.e., National Agricultural Insurance Scheme (NAIS), launched by the Hon'ble Prime Minister on **22nd June 1999** replaced the CCIS from Rabi 1999-2000 season.

**S37. Ans.(c)**

**Sol. The correct option is (c) Berseem 200 days.** Berseem (*Trifolium alexandrinum*), which is a forage crop, has a relatively shorter growth period than mentioned. The period for berseem is typically around 60 to 90 days, not 200 days. Therefore, the match is incorrect.

**S38. Ans.(d)**

**Sol.** The black soils are made up of extremely fine i.e., clayey material. They are well-known for their capacity to hold moisture. In addition, they are rich in soil nutrients, such as calcium carbonate, magnesium, potash and lime. These soils are generally poor in phosphoric contents.

**S39. Ans.(d)**

**Sol.** The brown color of soil is primarily due to the presence of organic matter and minerals, particularly manganese dioxide.

Here's an explanation of the correct option (d) Organic matter and manganese dioxide:

**Organic Matter:** Humus is the dark, organic component of soil formed by the decomposition of plant and animal residues. It contributes to the brown color of soil.

**Manganese Dioxide:** Manganese dioxide is a mineral that can impart a brown color to soil. It often occurs in soils and, depending on its concentration, can influence the soil's color.

**S40. Ans.(a)**

**Sol.** The correct option is (a) Holstein Friesian - 3% (4% fat in HF milk). Holstein Friesian (HF) is a dairy cattle breed known for its high milk production, but the fat percentage in its milk is typically around 3-3.5%, not 4%. Option (a) is a mismatch because it incorrectly states that Holstein Friesian milk has 4% fat.

