

CBSE – DEPARTMENT OF SKILL EDUCATION

MULTI SKILL FOUNDATION COURSE (SUBJECT CODE 416)

MARKING SCHEME

Class X (Session 2019–2020)

Time: 2 Hours

Max. Marks: 50

General Instructions:

1. *This Question Paper consists of two parts viz. Part A: Employability Skills and Part B: Subject Skills.*
2. **Part A: Employability Skills (10 Marks)**
 - i. *Answer any 4 questions out of the given 6 questions of 1 mark each.*
 - ii. *Answer any 3 questions out of the given 5 questions of 2 marks each.*
3. **Part B: Subject Skills (40 Marks):**
 - i. *Answer any 10 questions out of the given 12 questions of 1 mark each.*
 - ii. *Answer any 4 questions from the given 6 questions of 2 marks each.*
 - iii. *Answer any 4 questions from the given 6 questions of 3 marks each.*
 - iv. *Answer any 2 questions from the given 4 questions of 5 marks each.*
4. *This question paper contains 39 questions out of which 27 questions are to be answered.*
5. *All questions of a particular part/section must be attempted in the correct order.*
6. *The maximum time allowed is 2 hrs.*

PART A: EMPLOYABILITY SKILLS (10 MARKS)

Answer any 4 questions out of the given 6 questions of 1 mark each:

1.	Which of the following methods are used to receive information from the sender through a letter? (d) Writing	(1)
2.	Grooming is a term associated with (c) neat and clean appearance	(1)
3.	Which of the following is not a self-management skill? (b) Bargaining	(1)
4.	What does GPS stand for? (a) Global Positioning System	(1)
5.	What is the aim of entrepreneurship? (c) Both of the above	(1)

6.	<p>What are some of the environmental changes caused due to modern methods of agriculture? (a) Chemical pollution due to fertilizers</p>	(1)
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Answer any 3 questions out of the given 5 questions of 2 marks each:

7.	<p>What are the five sources of energy available to us? There are 5 fundamental sources of energy : (i) Nuclear fusion in the Sun (solar energy), (ii) Gravity generated by the Earth and Moon, (iii) Nuclear fission reactions, (iv) Energy in the interior of the Earth, and (v) Energy stored in chemical bonds. Most of the energy we use today come from fossil fuels (stored solar energy). But fossils fuels have a disadvantage in that they are non-renewable on a human time scale, and causes other potentially harmful effects on the environment.</p>	(2)
8.	<p>List any four characteristics of entrepreneurship. 1. Ability to take up risks 2. Believe in hard work and discipline 3. Adaptable and flexible to achieve the goals of enhancing quality and customer satisfaction 4. Knowledge of the product and services and their need or demand in the market 5. Financial literacy and money management skills 6. Effective planning and execution.</p>	(2)
9.	<p>List the steps to search for information using a web browser. To see the information on the various websites, you need an Internet Browser. An Internet Browser is an application or a software program on your computer or laptop which helps you visit the various websites. Some examples of browsers are Google Chrome, Mozilla Firefox and Internet Explorer. Searching for information: Do the steps below to search for information on the Internet. – Open an Internet browser – Type the topic, on which you want information, in the search box and hit the Enter key. – The search results having the required information will be displayed. Click Firefox icon to open Firefox Mozilla browser and search for information.</p>	(2)
10.	<p>What are the factors that affect self-confidence? Given below are some factors that affects self-confidence. (a) When we think we cannot do a particular work. (b) When we keep thinking of our past mistakes and feel bad about it, instead of learning from them. (c) When we expect to be successful at the first attempt itself and do not try again. (d) When we are surrounded by people who have a negative attitude, which is reflected in their speech.</p>	(2)

11.	<p>Write down the different types of verbal communication. Give an example for each type. Oral or Spoken Communication: Communication which involves talking. Face-to-face conversation, Talking on a phone Written Communication: Communication which involves written or typed words. Writing letters, notes, email, etc.</p>	(2)
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PART B: SUBJECT SKILLS (40 MARKS)

Answer any 10 questions out of the given 12 questions:

12.	<p>The following is an internationally recognized & accepted unit system. c. SI</p>	(1)
13.	<p>AC current is also called as - a. Alternating current</p>	(1)
14.	<p>Gas fuel from cow dung is called as- c. Bio-gas</p>	(1)
15.	<p>-----is used for rainfall measurement. b Rain gaug</p>	(1)
16.	<p>-----is used to draw a specific angle at a desired location in a drawing. b. Protractor</p>	(1)
17.	<p>-----is used to create a construction skeleton using cement mortar, metal rod & mesh. b. Ferro cement</p>	(1)
18.	<p>Typhoid is -----type of diseases a. Communicable</p>	(1)
19.	<p>Which of the following are blood cells. d. All of the above</p>	(1)
20.	<p>Person who has attained the age of ----- can be called as senior citizen. c. 60 years & above</p>	(1)
21.	<p>In----- breeding is done by avoiding direct contact of cow with bull. a. Artificial Insemination</p>	(1)
22.	<p>In drip irrigation a. Water is supplied at low speed b. Water is supplied at the base of the tree closer to the root system. c. Water is supplied at low pressure d. All of the above</p>	(1)
23.	<p>PH of----- is considered as neutral c. 7</p>	(1)

Answer any 4 questions out of the given 6 questions of 2 marks each:

24.	<p>Write down any two types of welding Arc Welding – Arc welding is a well-known, old, and conventional method. In this welding method, which is based on the principle of heating, heat is generated using electric current to induce welding. Gas Welding – In this method, welding is done using gas. Heating in this process is mainly done by combined proportionate combustion of Oxygen and Acetylene. Mixed welding gas of Argon and Carbon dioxide (CO₂) is used during gas welding.</p>	(2)
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25.	<p>What is Ferro cement? Ferro-cement is a new innovative construction material. In this, a skeleton is created using cement mortar, metal rods and mesh.</p>	(2)
26.	<p>What are the applications of an inverter? An inverter is an electronic circuit. It is a part of the uninterrupted power supply/source - UPS. Its job is to convert the DC voltage from the battery into AC voltage i.e. into a usable form for supplying household electricity. When the main source of current is on, the power supply is everywhere and the power is stored in battery. As the supply of power is off, the stored power is converted from DC to AC by inverter. The inverter is used for emergency power backup, it is also used in some aircraft systems to convert the aircraft DC power to AC.</p>	(2)
27.	<p>What is Biomass? Total mass of living matter is called as Biomass. Biomass is a fuel that is developed from organic materials, a renewable and sustainable source of energy used to create electricity or other forms of power. Waste from plant & animal origin can be used as biomass. The husk after harvesting, dry leaves, dry vegetables, shells of nuts, crushed sugarcane, rice husk, domestic bio wastage these all are the elements of biomass.</p>	(2)
28.	<p>Explain the benefits of rain water harvesting?</p> <ul style="list-style-type: none"> • It is an alternate means of water supply to ground water. • The construction and farming would be possible in areas with no water supply • High quality of water: clean, pure without chemicals. • Zero expenditure on water supply • Soil erosion and flood will be less. 	(2)
29.	<p>What are the different components of blood? Blood contains the following substances :</p> <ol style="list-style-type: none"> 1. Plasma which contains 90% of the water, through which transport of organic and inorganic materials takes place 2. Soluble substances - proteins, nutrients, hormones, enzymes, waste materials 3. Blood cells - red blood cells, white blood cells, thrombocytes 4. Protein - Serum Albumin, Serum Globulin, Fibrinogen 5. Nutrients - Glucose, amino acids, vitamins, minerals, salt 6. Hormones and enzymes. 7. Waste materials- urea, Co₂. 	(2)

Answer any 4 questions out of the given 6 questions of 3 marks each:

30.	<p>What are the major sources of water pollution?</p> <p>Following are the sources of water pollution -</p> <ul style="list-style-type: none"> • Chemical effluents from industries, agricultural and household waste, are the main sources of water pollution. • In many rivers or other water bodies, disposal of industrial & household waste, dumping of garbage, results in water pollution. • Oil spills also results in accumulation of oily layers on the water surface which destroys the aquatic ecosystem. • Effluents from pesticide & fertilizer industry can cause damage to aquatic ecosystem 	(3)
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31.	<p>Explain the important of Hemoglobin in Human blood?</p> <p>Hemoglobin is an important component of blood. Due to hemoglobin, the blood color is red. Hemoglobin is found in RBC's. Hb binds with oxygen. It is oxygen carrying molecule of RBC. Deficiency of Hb causes anemia. Due to lack of hemoglobin in the blood, oxygen is not adequately available to the cells, resulting in the possibility of many types of diseases in the body.</p>	(3)
32.	<p>Explain different components of nursery.</p> <p>Following are the important components of nursery – Seed bed/ Nursery bed, Mother plant, pot yard, office, store, water & electricity supply unit, tools & raw material, shed for packing saplings, warehouse, greenhouse etc.</p>	(3)
33.	<p>What are the advantages of artificial insemination?</p> <ol style="list-style-type: none"> 1. Many dairy farmers can benefit from the proven bull that has genes of good milk production. 2. In natural breeding, one bull can impregnate 50 to 60 cows in a year. On the other hand, using artificial insemination one bull can impregnate thousands of cows. 3. Every dairy farmer need not keep a bull. He can get rid of the expenses and trouble of maintaining the bull. 4. The expenses for artificial insemination are very less as compared to the expenses of maintaining a bull. This is particularly true for a dairy farmer having a small number of cattle. 5. The reproductive diseases which are spread by natural breeding do not spread via artificial insemination. 6. In natural breeding, it cannot be detected early if the semen of the bull is not suitable for breeding. On the other hand, in artificial insemination, the semen of the bull is tested first so there is no chance of using unsuitable bull. 7. In natural breeding, it is difficult to use big sized bulls for small cows. This problem is eliminated in the artificial insemination. 8. Some bulls are not useful for natural insemination due to injury or some other reasons. Such bulls can also be useful in artificial insemination. 	(3)
34.	<p>Explain the uses of capacitor?</p> <ol style="list-style-type: none"> 1. Capacitor stores and regulates the fluctuation in current and transfers it to the electric circuit. 2. Capacitor is used to temporarily store electric energy. There are two electric conductors in a capacitor. These are separated by an insulator. Glass, vacuum air, paper or plastics may be used as an insulator in the capacitor. 3. In an electric connection or circuit, capacitor is used to block direct current in order to allow flow of alternating current. 	(3)
35.	<p>Describe the uses of RCC Colum?</p> <ol style="list-style-type: none"> 1. The way skeleton of bones supports other delicate organs in the body of living organisms, RCC (Reinforced Cement Concrete) is used to strengthen the foundation of the building. 2. Cement concrete possesses good compressive strength; however, its tensile strength. Therefore, iron are placed along with concrete wherever tension is anticipated. 3. It is called as R.C.C (Reinforced Cement Concrete). Due to higher amount of strength in R.C.C. columns, they are durable and construction becomes long lasting. 4. It is economical and it is easy to construct. 5. It is useful for heavy load bearing structures. 	(3)

Answer any 2 questions out of the given 4 questions of 5 marks each:

36.	Differentiate between Diesel engine & petrol engine?	(5)																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Spark ignition engine [S.I. engine] Petrol engine</th> <th style="width: 50%; text-align: center;">Compressor ignition engine. [C.I. engine] Diesel engine</th> </tr> </thead> <tbody> <tr> <td>1. The mixture of air and petrol is sucked in and compressed in suction stroke</td> <td>Only air is sucked and compressed.</td> </tr> <tr> <td>2. The sparking is done at spark plug in air and petrol mixture and explosion is made.</td> <td>The explosion occurs when there is spray on diesel in hot air done by the injection nozzles.</td> </tr> <tr> <td>3. Spark plug functions in it.</td> <td>Injection nozzles function here.</td> </tr> <tr> <td>4. Light weight engine</td> <td>Heavy engine.</td> </tr> <tr> <td>5. Engine works softly so, vibrations are less.</td> <td>It rattles more because of vibrations.</td> </tr> <tr> <td>6. Need to maintain engine.</td> <td>Maintenance free engine.</td> </tr> <tr> <td>7. When engine works, the carbon less deposits in engine cylinder.</td> <td>The carbon deposits more in cylinder engine.</td> </tr> </tbody> </table>			Spark ignition engine [S.I. engine] Petrol engine	Compressor ignition engine. [C.I. engine] Diesel engine	1. The mixture of air and petrol is sucked in and compressed in suction stroke	Only air is sucked and compressed.	2. The sparking is done at spark plug in air and petrol mixture and explosion is made.	The explosion occurs when there is spray on diesel in hot air done by the injection nozzles.	3. Spark plug functions in it.	Injection nozzles function here.	4. Light weight engine	Heavy engine.	5. Engine works softly so, vibrations are less.	It rattles more because of vibrations.	6. Need to maintain engine.	Maintenance free engine.	7. When engine works, the carbon less deposits in engine cylinder.	The carbon deposits more in cylinder engine.
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37.	Mention the safety precaution need to be taken while working in workshop engineering section? ➤ Safe Practice - To adhere to safety norms, following things must be followed diligently : <ol style="list-style-type: none"> 1. We must have a comprehensive and thorough knowledge of the tools and equipment that we need. 2. During actual work, the tools and equipment should be handled carefully and safely 3. As far as possible, avoid wearing loose clothes while at work. Clothing like scarf, veil may get trapped in a machine leading to fatal accident. 4. While undertaking work like drilling, cutting, welding, threading, keep your face, especially eyes, away at a safe distance from the job. This helps to protect the face and eyes from the granular dusty metal hot particles while at work. 5. Keep the workplace clean and tidy. Keep unnecessary things away, at an appropriate place. 6. Switch off the main switch once the task is accomplished. Keep all the tools and equipment properly at an appropriate place. ➤ Safety Gear - Using the right safety gear is essential while at work. <ol style="list-style-type: none"> 1. Intense heat and radiations generated during welding may harm your eyes. So, always use a goggle or welding glass. 2. Use hand gloves while drilling. 3. While dealing with any electrical appliance, it is advisable to wear rubber sole boots/slippers. 4. Power tools should be properly insulated (electrically insulated) 	(5)																

38. **Write functions of any three soil nutrients essential for the growth of plant?** (5)

Functions of main nutrients in the plants : -

1. Nitrogen: - Due to this nutrient, the plant grows many leaves, the growth is vigorous and fast. More shoots grow and it ensures increase in the yield. The photosynthesis increases. The protein content in the grains as well as leafy and fruit vegetables increases and quality of the agricultural product improves. The fresh, shiny green color of the crop depends on the chlorophyll content in the plant. The amount of chlorophyll depends on the nitrogen supply to the plant.

2. Phosphorus: -Phosphorus has significant role in bio-chemical processes in the plant. Due to these nutrients, mainly growth of the roots becomes fast and vigorous, and the capability of the plants to absorb water and other nutrients increases. This stimulates production of carbohydrates, fats, and protein. These nutrients help to increase oil content in the oil seeds and protein contents in cereals, pulses. Due to nitrogen, mainly vegetative growth of the plant is stimulated. Phosphorus increases reproduction activities. So, the crop enters flowering stage early and becomes mature early.

3. Sulphur: -This nutrient is very essential for crops for preparing protein, fats, and chlorophyll. In pulses and oilseed crops, the amount of proteins and oils respectively increases due to this nutrient. Sulphur is helpful to produce Sulphur containing amino acids in the plants (e.g. methionine, cysteine, and growth regulators (e.g. thiamine, biotin). Due to this, there is more nitrogen fixation. Absorption is almost as much as phosphate; the quality of agricultural product improves. So, after nitrogen, phosphorus, and potash, now a days Sulphur is mentioned as the fourth main nutrient.

39. **Differentiate between communicable & Non communicable diseases?** (5)

COMMUNICABLE DISEASE	NON-COMMUNICABLE DISEASE
The diseases spread from person to another, are called as communicable' diseases. These diseases can be spread through the air, water, etc.	The disease which does not spread from one person to another through any mode is called as non-communicable disease.
Caused by pathogens and considered as highly infectious and vectors play the major role in spreading disease from one person to another	Caused due to allergy, illness, malnutrition or abnormalities in cell proliferation, changes in lifestyle, environment play a significant role.
Bacteria and virus.	No infectious agent.
Tuberculosis, AIDS, Typhoid, Cholera, Malaria.	Cancer, Rickets, Allergies, Kwashiorkor, Diabetes, Heart disease, etc.
This disease cannot be inherited from one generation to another	This disease can be inherited.
Treated by conventional methods. Acute (develops quickly).	Treated conservatively or surgically. Chronic (develops slowly and last for long-period).