CBSE – DEPARTMENT OF SKILL EDUCATION

DESIGN (SUBJECT CODE 830)

Sample Question Paper with Marking Scheme

ClassXII (Session 2019–2020)

Time: 3Hours   **Max. Marks: 60**

General Instructions:

1. *This Question Paper consists of two parts viz. Part A: Employability Skills and Part B: Subject Skills.*

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.*

Part B: Subject Skills (50 Marks):

   iii.   *Answer any 10 questions out of the given 12 questions of 1 mark each.*
   iv.   *Answer any 5 questions from the given 7 questions of 2 marks each.*
   v.   *Answer any 5 questions from the given 7 questions of 3 marks each.*
   vi.   *Answer any 3 questions from the given 5 questions of 5 marks each.*

2. ***This question paper contains 42 questions out of which 30 questions are to be answered.***
3. *All questions of a particular part/section must be attempted in the correct order.*
4. *The maximum time allowed is 3hrs.*

PART A: EMPLOYABILITY SKILLS (10 MARKS)

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

1.	_____ phrases are the trickiest to identify.
	   a. Absolute
	   b. Verbal
	   c. Appositive
	   d. Gerund
	
	Answer :- a. Absolute
		(1)

2.	Dressing and grooming does not affect your overall impression on others (True/ False). Answer- (True)	**(1)**
3.	What is the address of the cell formed by the intersection of column 5 and row 8? Answer- E8	**(1)**

4.	_____do not have a fixed time and it is flexible as per the demands of the customers. It does not even need a shop to sell their products.
	   a. Trading
	   b. Manufacturing
	   c. Services
	   d. All of these
	Answer :- c. Services
		(1)

5.	How does green buildings benefit environment? Answer- By using eco-friendly materials to conserve energy.	(1)

6.	Grooming is important because it helps us to-
	      a) Look neat and clean
	      b) Wear clothes that fit you
	      c) Help us stay healthy
	      d) Help us to physically active
	
	  Answer- Look neat and clean
		(1)

Answer any 3 questions out of the given 5 questions of 2 marks each:

7.	Why Active Listening is important? Answer- Active listening is important because 1. It involves attentively seeking to understand a speaker's message, rather than passively hearing the words that a speaker says. 2 It can help to build trust within a conversation, thereby allowing the speaker to communicate more easily, openly and honestly.	(2)
8.	What do you know about influence of personality? Explain it. Answer - **Personality** is **influenced** by both biological and environmental factors; culture is one of the most important environmental factors that shape **personality**.	(2)
9.	Write down the difference between Transition and Animation effect in digital presentation. Answer- Slide **transitions** are applied to whole slide whereas **animation** effects are applied to objects (text, shape, picture etc.) on a slide. For a slide you can have only one **transition** effect while multiple **animation** effects can be applied on each object on the slide.	(2)
10.	What do you mean by the term 'customer survey'? What do entrepreneur try to find out from this? Answer- Customer survey is an exercise that entrepreneurs do to understand whether there is a market for what they have to offer. Through this survey, entrepreneurs try to know whether they are meeting customer needs and also understand what their preferences are. Customer survey is one of the most effective ways to find out what customers want.	(2)
11.	What is the key to environmental protection? Answer - It is to prevent the degradation of the natural environment, which is important for all living creatures. One of the biggest problems in the environment is related to fossil fuels, which leads to pollution, climate change and natural resource depletion.	(2)

PART B: SUBJECT SKILLS (50 MARKS)

Answer any 10 questions out of the given 12 questions: write true and false to the following.

12.	Every Tool /technique should be used because it adds value to a design project as a whole. Ans. (True)	(1)
13.	The composition of the design team cannot have consequential impact on the project as a whole. Ans. (False)	(1)
14.	Designers and Design team always do their work in a specific environment and context. Ans. (True)	(1)
15.	The employment of the tool/technique is not justified by its functions. Ans. (False)	(1)
16.	The designer has to understand the customer needs and has to obtain a general comprehension of the design environment. Ans. (True)	(1)
17.	A cube has 6 faces, 12 edges and 8 corners. Ans. (True)	(1)
18.	A product designer's role is not to combine art, science and technology to create new products. Ans. (False)	(1)
19.	A good logo is distinctive appropriate practical graphic and simple in form and it conveys the owners intended message. Ans. (True)	(1)
20.	Design has an element of taste, but the difference between good and bad design is largely a matter of opinion. Ans. (True)	(1)
21.	Design thinking is multi-disciplinary in nature .It helps to merge the worlds of design, technology, & business under one powerful, problem- solving tool set. Ans. (True)	(1)
22.	Design thinkers constantly seek opportunities for radical collaboration and co-creation. Ans. (True)	(1)
23.	Design does not help the wood and plastic industries to develop new products. Ans. (False)	(1)

Answer any 5 questions out of the given 7 questions of 2 marks each:

24.	Why we do pilot testing in design? Ans. a) The most important objective of pilot testing is to debug the software and procedure use of the test. b) Prototype will help to check if the product is ready for full scale implementation. c) It will help to make a better decision on allotment of time and resources. d) It will give an opportunity to complete your target population's reaction to program.	(2)

25.	Why is prototype necessary in design?	(2)
	Ans. Designing prototypes is one part of the process. But there are various approaches to prototyping and it is always necessary to select the correct approach to your product which fits into the time and resource constraints. This type of prototype helps to make changes easily and quickly.	
26.	What safety measures are required in plastic industry towards our health?	(2)
	Ans. 1. Use of proper tagout, blockout and lockout procedures, especially when machines have defects or damaged. 2. Must always wear required proper PPE like gloves, steel toed boots, goggles or face shields, ear protection, hard hats, respirators, and well-fitting clothes. 3. Must also have an interlocked or fixed removable barrier that prevents an employee from reaching into the clamping mechanism. 4. It's important that you place eyewash stations within 25 feet of work areas where chemicals are poured, molded, mixed or transferred.	
27.	What is the role of safe inspection in wood industry? Ans. It is the duty of an employer to carry out risk control under the OHS Regulation 2001, and eliminate the risk. Minimising the risk by administrative means such as adopting safe working practices or providing appropriate training information & instruction and using protective equipment.	(2)
28.	Define Ideation in design. Ans. Ideation is the process by which you generate, develop and then communicate new ideas. Ideas can take many forms such as verbal, visual, concrete or abstract. Ideation does not need to be beautiful to be effective. Creating ideas is the main point rather than graphic design.	(2)
29.	Mention the forms and sources required in design. Ans. Design requirement is commonly accepted as a description that defines what the product should do and set up the boundaries to product solution space. 	(2)
30.	List basic materials used in design. Ans. The basic materials are metals, ceramics, polymers and composites, polythene, plastic products, fiber glass, sports equipment, glass plastic, wood , metal, concrete, terrazza, mineral composites, bamboo, cork, mother pearl, natural rubber , clay , paper,/ cardboard , recycled material.	(2)
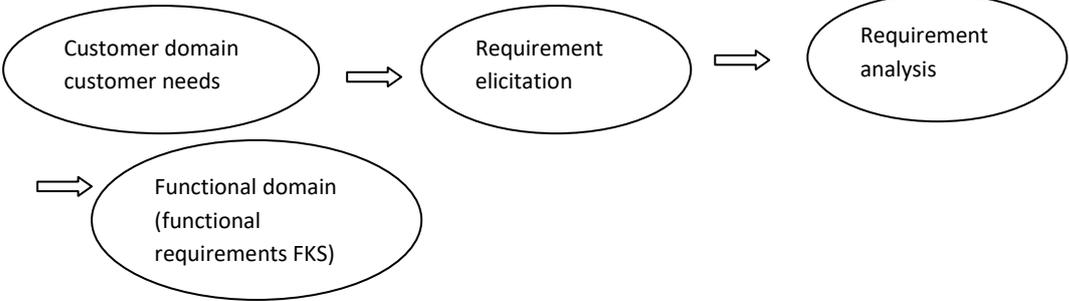
Answer any 5 questions out of the given 7 questions of 3 marks each:

31.	Explain the concept of positive and negative space with the help of examples?	**(3)**
	Ans. Positive and negative space play an important role in determining the overall composition in work of art. By understanding Positive and negative space and applying your knowledge you can become more successful in designing your composition. Positive space refers to the main focus of a picture, while negative space refers to the background. When used creatively and intelligently, positive and negative space together can tell a story using a visual composition alone. The negative space is most often neutral or contracting, focusing our attention on the main subject ,the positive shape and providing a place for the viewer's eye to rest .Without enough negative space ,a composition can look , busy with too many distracting elements.	

32.	What are the ideation strategies?
	Ans. Ideation, the process of coming up with business ideas and concepts is critical to the success of your business. Brainstorming is a bit of an art form in a perfect world a group of highly motivated people can sit down and bounce ideas of each other.
	    1. Come up with solutions
	    2. Large amount of ideas
	    3. Wide scope of ideas addressing
	    4. Build on ideas of others
	    5. Be visual
	    6. Get concrete
	    7. Go for quantity
		(3)

33.	What is the role of design in different professions such as design, textile design, interior design, architecture, fashion design industries? Ans. The role of design is to solve the problem of the people and to provide solutions. The role of the design designer is to design for different industries to create and execute design solution for their problems of form, function, usability, physical ergonomics, marketing, brand development, sustainability and sales. Design designer develops the concept for manufactured products such as cars, home appliance and toys. they combines art , business , and engineering to make product that people use every day design designers focus on the users experience in creating style and function for a particular gadget or appliances . For example the interior designer provides a soul to a building or space and makes a space more functional pleasant and livable. Interior designers play a big role in the everyday life.	**(3)**
34.	How will you choose colour in your design if your target audience is international? Ans. If my target audience is international i will create a company that is successful and must identify my target markets or the individual or companies. I might be planning to offer my services of products to its thus essential that i simply comprehend and identity the colours that may bring the particular market. Understand the market talk and looking to bring the colour language that they may respond. Before executing a big and expensive promotion then examine your colour selections on a tiny sample market. Compare several colour choices, get comments after which select the colour which gives the best response to you and build segments either as part of a plan & then analyze them immediately. Easily share any segment you have built for activities and targeting to deliver great result.	**(3)**

35.	Which is the software you have been using for images? Compare any two by giving their advantages and disadvantages?	**(3)**
	Ans. Most of the designers have some type of workflow that involves using multiple programs at any given time. May be you are flipping back and forth between Photoshop and illustration or maybe it's a HTML, editor, internet browser. To get start in design at the minimum, you need raster graphics editors, such as adobe illustration skills often use drawing tablets to lay down sketches or colour to designs.	
	The advantages are - more powerful and more useful computers, new and improved interface. Solving new problems, better handling of information, relieves information over load, conversion of informal into knowledge. And disadvantages - increased costs , difficulty with software development- slow and expensive	
36.	How the design helps in dealing with emergencies?	**(3)**
	Ans. Based on the initial safety audit, identifying the potential safety risks and health hazards, you should not only plan for the improvement measures but also prepare plans on how to deal with the possible emergencies in the tannery and effluent treatment plant. Put the emergency plan into writing and inform staff and outside emergency services. Key elements of your plan should be training and emergency drill. The plan should include clear explanations on:	
	1. How to alarm and to evacuate, 2. How to rescue accident victims and to give first medical aid, 3. Procedures to adopt during and after emergency. An emergency plan without emergency training or drill is useless.	
37.	How do we assess the risk control in metal and plastic industries?	**(3)**
	Ans. Ans. There are no fixed rules on how a risk assessment should be carried out, but there are a few general principles that should be followed . Five steps to risk assessment 1. Identify the hazard .2. Decide who might be harmed and how .3. Evaluate the risk and decide on control measures .4.Record your findings and implement them. 5. review your assessment and update it necessary	
	For example plastic we measures safety by giving training to operators about all the data and how to control fumes and temperatures. Regular inspection and checking of machines should be carried out. Material should be processed at the right temperature.	

Answer any 3 questions out of the given 5 questions of 5 marks each:

38.	Which basic material will you use for product for children and why? Give reasons.	**(5)**
	Ans. The basic materials we will like to use for children are wood and rubber because they are not harmful for the children health. Wood gives natural warmth and effect of lowering blood pressure and heart rates. Stress and anxiety and increasing positive social interaction. Wood and wood products are also a store for carbon. Thus helping to minimize carbon dioxide in atmosphere.	
	Natural rubber toys are most important as they don't harm the children with the unintended consequences of chemical expose specially when chewed and sucked on. They are non-toxic, naturally soft, Renewable material, Breathable, Low impact and sustainability, Harvested , Bio degradable, Phthalate free, Polyvinyl chloride free, Heavy metal free and	

made from natural source called Hevea Tree.

Natural Rubber is minimally processed, heat sensitive and cannot be left open in direct sunlight. It should not be cleaned or washed with hard chemicals instead simple water vinegar or lemon can be used.

39.	How does brainstorming helps in ideation process? Ans. Brainstorming is one of the primary methods employed during the Ideation stage of a typical Design Thinking process. Brainstorming is a great way to generate many ideas by leveraging the collective thinking of the group, by engaging with each other, listening, and coming up with a concrete plan based on ideas of other participants. Example:- • The student used colors to organize her ideas: red is the idea she started with, green are broader concepts, black are subtopics. She put a red star on the topic she decided to focus on. • Situation: The number of customers to a shop has reduced in recent months; the owner is looking for new ways to attract new customers and to increase the frequency of existing customers. Problem: How can we get more customers? The Brainstorming : • Plan the session – fix the place and time • The shop employees are invited to participate. However the supervisor and owner are not involved in the session • The session is held away from the shop in a relaxing environment • The facilitator is a good communicator and uses a word association game to break the ice and warm-up the group • The facilitator raises the question: How can we get more customers? She/he writes down the problem on a flipchart • She/he set out the rules of the session; 20 minutes, anyone can produce an idea, every participant has to respect the ideas of his/her colleague and NOT CRITICISE! • The facilitator calls for ideas • The scribe, using a mind map, writes down the ideas generated.	(5)
40.	Explain simple product design. Justify your answer with suitable example? Ans. Simple product is a systematic approach, product designer, conceptualize and evaluate ideas turning them into tangible invention and products. The product designer role is to combine art and science or technology to create new products that people can use. Product design is to create a new product to be sold by a business to its consumers for example : A very broad co-efficient and effective generation and development of ideas through a process that leads to new products. It is a major aspect of new product development.	(5)
41.	What is meant by geometric shapes and how they are used to convey specific information in a design composition? Ans. Geometric shapes give a sense of order and cleanliness to a composition. This is why designers often use geometric shapes when organizing text into distinct areas or even into blocks for paragraphs, making these shapes important in the design element of typography. However, each shape can express a different message.	(5)

	Geometric shapes are basic squares, rectangles, circles, triangles, and the like. These typically include sharp corners but may have rounded elements. Most geometric shapes on web pages are created through layout and CSS. Architects use geometry to study and divide space as well as draft detailed building plans. Builders and engineers rely ongeometric principles to create structures safely. Designers apply geometry (along with color and scale) to make the aesthetically pleasing spaces inside. Applying geometry in design is unavoidable.	

42.	What are the benefits of prototyping?
	
	Ans. The benefits of prototyping reduces time and costs. Prototyping improves the quality of specifications and requirements provided to customers. It helps to identify and address problems. IT GIVES THE CLIENT AND END USER A GREATER SENSE OF INVOLMENT, OWNERSHIP AND BETTER APPRECIATION OF THE FINAL SOLUTION. It gives the client and end - user a greater sense of involvement, ownership and a better appreciation of the final solution.
	
	For example, Digital prototyping for a folder design explaining its functioning using digital software tools open position of the folder with in-side jacket design. Final concept presentation for greeting and design for an organization.
	
	Important points for prototypes benefits are :-
	
	     1. Bringing the user interface design to life. ...
	     2. Allowing users to provide valuable feedback within the proper context. ...
	     3. Helping reduce overall development time. ...
	     4. Acting as a useful reference tool for developers. ...
	     5. Confirming a common vision among users and stakeholders. ...
	     6. Creating excitement within the organization.
		(5)

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