



Indian School Al Wadi Al Kabir

Mid-term Examination (2025-2026)

Class: X
Date: 25/09/25

Design Thinking and Innovation (422)
Set- I

Max. marks: 50
Time: 2 hrs.

ANSWER KEY

SECTION – A

Q.1	Answer any 4 out of the given 6 questions on Employability Skills	(1×4=4)
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Q.NO	ANSWERS	
i.	(c) Physical Barrier	1
ii.	(d) function keys	1
iii.	(a) Measurable	1
iv.	(b) Dragging	1
v.	(a) Self-confidence	1
vi.	(d) A strength in recognizing weakness and taking action.	1

Q.2	Answer any 5 out of the given 6 questions	(1×5=5)
i.	(d) parallel	1
ii.	(b) Integrating features from different product categories to address diverse needs.	1
iii.	(a) The fox contrasts with the grapes to highlight his inability to reach them. showing how people rationalize their failure.	1
iv.	(c) drawings	1

v.	(c) Options I, III and IV are correct while II is incorrect	1
vi.	(a) flexibility and adding more life and energy in the motion.	1

Q.3	Answer any 5 out of the given 6 questions	(1×5=5)
i.	(c) Spontaneous cognitive creativity	1
ii.	(d) live actors	1
iii.	(c) Divergent Thinking	1
iv.	(d) Stop motion animation	1
v.	(b) Both Assertion and reason are true, but reason is not the correct explanation of Assertion.	1
vi.	(d) Adding complex visual effects.	1
Q.4	Answer any 5 out of the given 6 questions	(1×5=5)
i.	(a) Using leaves as bookmarks or coasters.	1
ii.	(b) Crisis, climax and conclusion	1
iii.	(a) Gestural	1
iv.	(d) Deliberate spontaneous creativity	1
v.	(a) Squash and stretch	1
vi.	(d) Asking questions in the middle of the conversation	1

Q.5	Answer any 5 out of the given 6 questions	(1×5=5)
i.	(b) Generating many possible solutions to a problem	1
ii.	(b) Creating original and unconventional solutions	1
iii.	(b) Eliminate	1
iv.	(b) To generate and connect ideas visually	1
v.	(c) Timing and spacing	1
vi.	(c) A sequence of drawings representing scenes	1

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks) Answer each question in 20 – 30 words.

6	<p>There are 7 C's effective communication which are applicable for both written as well as oral communication. These are as follows –</p> <ul style="list-style-type: none"> a. Clear – Always say clearly, what you want to say. b. Concise – Always use simple language and say only what is required. c. Concrete – Always use proper words and phrases in the sentences. d. Correct – Always use correct spelling and grammar in the sentences. e. Coherent – Your word should be related to the main topic and your word should make sense. f. Complete – Your message should be complete and have all the needed information. 	2
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	<p>g. Courteous – Be honest, respectful and friendly with others.</p> <p><u>Best practices of effective communication</u></p> <ol style="list-style-type: none"> 1. Use simple language 2. Be respectful of others' opinions 3. Do not form assumptions on culture, religion or geography 4. Try to communicate in person as much as possible 5. Use visuals 6. Take help of a translator to overcome differences in language 	
7	<p>. In SMART goals 'S' stands for Specific goal. A specific and clear goal answers six questions. Who is involved in the goal? What do I want to do? Where do I start? When do I start and finish? Which means do I use? Why am I doing this? For Example:</p> <p>Not a specific goal: "I want to become a doctor."</p> <p>Specific goal: "I want to become a doctor by studying MBBS after my school gets over. After getting my MBBS degree I will make a hospital in my village."</p>	2
8	<p>A: Adversity or the stressful event</p> <p>B: Beliefs or the way you respond to the event</p> <p>C: Consequences or actions and outcomes of the event</p>	2
9	<p>A Trojan Horse disguises itself i.e., it appears to be a useful software program but once it reaches a computer it starts behaving like a virus and destroying data.</p>	2
10	<p>(a) Use passwords to login to your computer: Use passwords that are difficult to guess. Passwords are difficult to hack if they are a mix of small (For example 'a b c d') and capital letters (For example, 'H J E R'), numbers (For example '8 7 6 5') and special characters (For example, '% ^ # \$'). This would prevent unauthorized people from using your</p>	2

	<p>computer.</p> <p>(b) Install Anti-virus and Firewall: Anti-viruses and Firewall monitor the data coming in and out of a computer and prevent and viruses from entering. Anti-viruses can also detect and clean viruses that may have entered a computer.</p> <p>(c) Encrypt Data: This is usually done by banks and companies in which important customer information is stored. They can encrypt their entire hard disk using the encrypting feature in Windows (Bitlocker). This would force users to use a decryption password (or key) before starting the computer thus preventing unauthorized usage.</p> <p>(d) Secure sites: Give details of your credit card or bank account only on secure sites. See in the address bar of the browser. If the site address starts with https://and a lock symbol, then it is safe to give your credit card and bank details</p>	
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Answer any 4 out of the given 6 questions in 20 – 30 words each (2 x 4 = 8 marks)

Q.11	Criss-crossing lines and shapes tend to evoke feelings of chaos and disorder, while horizontal lines and flat shapes create a sense of calmness and stability, reflecting the task's emphasis on how different design elements can influence emotional responses.	2
Q.12	Drawing a character in multiple poses and expressions is important to demonstrate the character's behavior, versatility, and emotional range, helping to bring them to life and make them relatable to the audience.	2
Q.13	Adding voiceover, music, and sound effects improves animatics by enhancing emotional engagement and clarifying narrative elements. For example, a voiceover can provide character dialogue or narration, music can set the mood or tone of a scene, and sound effects can simulate actions or environment (eq : footsteps or background noise), making the animatics more immersive and providing a clearer sense of the film's atmosphere.	2
Q.14	In Stop Motion Animation objects are manipulated in small increments with a bit of change successively one after another. Each of these successive images are photographed and when played back, the objects will be seen in motion. Its possible to do Stop Motion Animation with all kinds of objects. Use of Puppet is called Puppet animation.	2
Q.15	Stories are a sequence of events or a quest by someone to solve the problem, and find a solution. We tell stories to preserve and carry forward culture, and	2

	information. Stories can be used as a means of entertainment and to evoke certain emotions. Observation is key to writing relatable stories. Genre controls what you write and how you write it. It describes the style and focus of the story you write. There are many genres like romance, action-adventure, science fiction, fantasy, speculative fiction, suspense/thriller, horror, mystery, historical, comedy, etc.	
Q.16	The learner can ensure an enjoyable storytelling process by fully immersing themselves in the story, using creative and expressive methods to convey emotions, and encouraging interaction or participation from the audience to make the experience fun and engaging for everyone involved.	2

Answer any 3 out of the given 6 questions in 50– 80 words each (4 x 3 = 12 marks)

Q.17	<p>To redesign a vendor cart, the first step is to thoroughly analyze the existing cart. This involves studying its functions, such as how it holds and displays items, its portability, and its overall construction. Key factors to consider include the cart's mobility, ease of use, and the ability to with-stand various weather conditions. To extend the carts' usefulness, one might focus on improving storage capacity, easy of setup and takedown, and features that enhance customer interaction. For instance, a redesign could incorporate collapsible shelves to increase storage space while maintaining portability. Additionally, integrating wheels with a locking mechanism could make the cart easier to maneuver and secure in place.</p> <p>Example: A redesign could involve adding modular compartments that can be adjusted or removed based on the vendor's needs. This flexibility allows for customization depending on whether the cart is used for fruits, vegetables or street food. Enhanced portability could be achieved by using light-weight, durable materials and adding an ergonomic handle for easy pushing and pulling.</p>	4
Q.18	<p>1. Clarity of Speech</p> <ul style="list-style-type: none"> • What it is: Speaking clearly, pronouncing words correctly, and avoiding mumbling or speaking too fast. • Why it matters: Your audience can only understand and follow your ideas if you express them clearly. Clear speech ensures your message is received accurately. <hr/> <p>2. Confidence</p> <ul style="list-style-type: none"> • What it is: Showing self-assurance through your tone, posture, and eye 	4

contact.

- **Why it matters:** Confidence makes your audience trust your knowledge and keeps them engaged. Nervousness can distract from your content.
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3. Eye Contact

- **What it is:** Looking at your audience rather than reading entirely from notes or slides.
 - **Why it matters:** Eye contact builds a connection with your listeners, making your presentation feel personal and engaging.
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4. Body Language

- **What it is:** Using gestures, posture, and facial expressions to support your speech.
 - **Why it matters:** Positive body language reinforces your message, shows enthusiasm, and keeps your audience interested.
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5. Voice Modulation

- **What it is:** Varying your pitch, tone, and volume while speaking.
 - **Why it matters:** A monotonous voice can bore listeners. Changing your tone emphasizes important points and maintains attention.
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6. Listening Skills

- **What it is:** Paying attention to audience reactions, questions, or feedback during or after your presentation.
 - **Why it matters:** Listening allows you to adapt, clarify doubts, and interact effectively, making your presentation more dynamic.
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7. Organization & Structure

- **What it is:** Presenting your ideas logically, with a clear introduction, main points, and conclusion.
- **Why it matters:** A well-structured presentation helps the audience follow your thoughts easily and retain information.

	<hr/> <p>8. Use of Visual Aids</p> <ul style="list-style-type: none"> • What it is: Supporting your speech with slides, images, or charts without overloading them with text. • Why it matters: Visuals make complex information easier to understand and help keep the audience engaged. <hr/> <p>9. Time Management</p> <ul style="list-style-type: none"> • What it is: Covering your content within the allotted time. • Why it matters: Sticking to time shows professionalism and respects the audience's schedule. 	
Q.19	<p>Characters are the key elements in an animated film as they are the most important part of a story and the audience identifies themselves with them. [1 mark] The imaginary alien by the door-</p> <ol style="list-style-type: none"> 1. Attributes - their characteristics- A child/ grown up/old person/male/female/animal (or any other relevant) 2. Proportion – exaggerating some of the features- big head/ears/nose/legs/fingers (or any other relevant) 3. Expressions- their personality- smiling/ angry/ confused/ scared (or any other relevant) 4. Poses and Gestures – spinning head/ jumping/ leaning against door/running (or any other relevant) 5. Colours and shades – skin tone/clothes/accessories color/ texture. 	4
Q.20	<p><u>Case study</u></p> <p>Types of creativity: This is one of the ways in which creativity can be classified. The activities are designed to accommodate all four types of creativity.</p>	4

	<p>A. Deliberate cognitive creativity is when we are focused and are consciously aware of the process based on our prior knowledge like the inventions of Edison.</p> <p>B. Deliberate emotional creativity is consciously influenced by our emotions.</p> <p>C. Spontaneous cognitive creativity is an unconscious and unpredictable process, but still requires prior knowledge like Archimedes and Newton’s discovery.</p> <p>D. Spontaneous emotional creativity is what usually occurs in artists and musicians.</p>																	
Q.21	<p>1. Squash and Stretch – This principle gives a sense of weight and flexibility to drawn objects. For example, a bouncing ball squashes when it hits the ground and stretches when it moves up.</p> <p>2. Timing and Spacing – Timing refers to the number of frames used for an action, which affects the speed and emotion of the motion. Spacing controls the distance between each frame to create smoothness or abruptness.</p>	4																
Q.22	<p>SCAMPER – a simple,quick creativity technique.</p> <p>SCAMPER stands for: Substitute, Combine, Adapt, Modify, Put to another use, Eliminate and Reverse.</p> <p>1. Toothbrush</p> <table><thead><tr><th>SCAMPER Step</th><th>Application</th></tr></thead><tbody><tr><td>Substitute</td><td>Replace nylon bristles with eco-friendly bamboo or silicone.</td></tr><tr><td>Combine</td><td>Add toothpaste dispenser into the handle.</td></tr><tr><td>Adapt</td><td>Use the grip design of a pen for better handling.</td></tr><tr><td>Modify</td><td>Make it foldable or retractable for travel use.</td></tr><tr><td>Put to another use</td><td>Use old brushes to clean jewelry or computer keyboards.</td></tr><tr><td>Eliminate</td><td>Remove the need for separate toothpaste by infusing it in the brush head.</td></tr><tr><td>Reverse</td><td>Change the angle of the head for better reach of molars.</td></tr></tbody></table>	SCAMPER Step	Application	Substitute	Replace nylon bristles with eco-friendly bamboo or silicone.	Combine	Add toothpaste dispenser into the handle.	Adapt	Use the grip design of a pen for better handling.	Modify	Make it foldable or retractable for travel use.	Put to another use	Use old brushes to clean jewelry or computer keyboards.	Eliminate	Remove the need for separate toothpaste by infusing it in the brush head.	Reverse	Change the angle of the head for better reach of molars.	
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2. Water Bottle	
SCAMPER Step	Application
Substitute	Use stainless steel instead of plastic.
Combine	Combine with a Bluetooth speaker or a UV water purifier.
Adapt	Add a tea infuser or fruit infuser inside.
Modify	Add a temperature display or smart reminder to drink water.
Put to another use	Use as a dumbbell when filled with water.
Eliminate	Remove the need for a cup with a built-in foldable spout.
Reverse	Design with a side handle or carabiner clip on the lid.
