



Indian School Al Wadi Al Kabir

Post -Midterm Examination (2025-26)

Class: IX

Sub: Skill Subject

Max. Marks: 50

DESIGN THINKING & INNOVATION (422)

Date: 23/11/2025

Set - I

Time: 2 hours

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **22 questions** in two sections: Section A & Section B.
3. Section A has objective-type questions, whereas Section B contains subjective-type questions.
4. **Out of the given (5 + 17 =) 22 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 2 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):**
 - i. This section has 05 questions.
 - ii. Marks allotted are mentioned against each question/part.
 - iii. There is no negative marking.
 - iv. Do as per the instructions given.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
 - i. This section has 17 questions.
 - ii. A candidate has to do 10 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q. 1	Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)	
i.	Which of the following is not a self-management skill? (a) Understanding self (b) Problem solving (c) Bargaining (d) Confidence-building	1
ii.	What is the best way to start our day positively? (a) Think about all that can go wrong. (b) Think about all your accomplishments so far and feel good about them. (c) Think about the difficult test you will face during the day. (d) Think about the difficult test you will face during the evening.	1

iii.	<p>Assertion(A): TV and radio have been used as ICT tools for a long time.</p> <p>Reason(R): Radio is used to broadcast audio, while TV is used to broadcast audio-visual information to many people.</p> <p>(a) Both A and R are correct, and R is the correct explanation of A</p> <p>(b) Both A and R are correct, but R is not the correct explanation of A</p> <p>(c) A is correct, but R is not correct</p> <p>(d) A is not correct, but R is correct</p>	1
iv.	<p>What is a short-range wireless communication technology called?</p> <p>(a) Wi-Fi</p> <p>(b) Internet</p> <p>(c) Bluetooth</p> <p>(d) PS</p>	1
v.	<p>What is the aim of entrepreneurship?</p> <p>(a) Earn a profit</p> <p>(b) Solve customers' needs innovatively</p> <p>(c) Both of the above</p> <p>(d) None of the above</p>	1
vi.	<p>The process of developing a business plan, launching and running a business using innovation to meet customer needs, and making a profit is entrepreneurship.</p> <p>(a) Entrepreneurship</p> <p>(b) Management</p> <p>(c) Investment</p> <p>(d) Marketing</p>	1

Q. 2	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	<p>Who is considered a Design Thinker?</p> <p>(a) A person who strictly follows traditional problem-solving methods.</p> <p>(b) A person who applies the Design Thinking process to solve problems and find innovative solutions.</p> <p>(c) A person who only works in graphic design.</p> <p>(d) A person who avoids collaboration and experimentation.</p>	1
ii.	<p>In which phase of the DTI will you imagine, create, and explore?</p> <p>(a) Understand</p> <p>(b) Reflect</p> <p>(c) Ideate</p> <p>(d) Observe</p>	1
iii.	<p>What is a primary goal of design in problem-solving?</p> <p>(a) To replicate existing solutions</p> <p>(b) To pursue creativity and innovation</p> <p>(c) To avoid risk and experimentation</p> <p>(d) To focus only on aesthetics</p>	1
iv.	<p>_____ is known as “the brain of the camera”.</p>	1

	(a) Aperture (b) Shutter (c) Lens (d) Image Processor	
v.	_____ measures the sensitivity of image sensor. (a) ISO (b) Aperture (c) Shutter Speed (d) Light Settings	1
vi.	In a digital camera, which component is responsible for converting the light that passes through the lens into electrical signals, which are then processed to form a digital image? (a) Lens (b) Aperture (c) Shutter (d) Sensor	1

Q. 3	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	_____ is the space that your subject matter takes up in your composition. (a) Negative Space (b) Positive Space (c) White Space (d) Black Space	1
ii.	Which of the following shapes represent things in nature but aren't perfectly representative? (a) Organic Shapes (b) Geometric Shapes (c) Virtual Shapes (d) Abstract Shapes	1
iii.	_____ defines the size and scale between two elements in a design. (a) Emphasis (b) Proportion (c) Value (d) Rhythm	1
iv.	Which of the following is not a 'principle of design'? (a) Balance (b) Contrast (c) Value (d) Rhythm	1
v.	_____ are the basic rules that help make designs look good and work well.	1

	(a) Elements of Design (b) Principles of Design (c) Structures of Design (d) Fundamentals of Design	
vi.	_____ is the visual quality of repeating parts of an image across an axis, along a path or around a center. (a) Symmetry (b) Asymmetry (c) Centricity (d) Eccentricity	1

Q. 4	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	A unit of space created by columns and rows in a grid is known as _____. (a) Columns (b) Alleys (c) Module (d) Gutter	1
ii.	Which of the following is not a type of layout grid? (a) Manuscript grid (b) Module grid (c) Column grid (d) Digital grid	1
iii.	A method of documentation where only significant findings or deviations from the norm are documented, streamlining the process is known as _____. (a) Narrative charting (b) Charting by Exception (c) Computerized Documentation (d) Problem-Oriented Charting	1
iv.	What is the full form of 'SBAR' in documentation methods? (a) Situation, Background, Assessment, Recommendation (b) Summary, Background, Action, Result (c) Subject, Behavior, Analysis, Response (d) Situation, Behavior, Action, Result	1
v.	_____ is a way of expressing gratitude to someone who has helped you with your research or project. (a) Reference (b) Appendix (c) Acknowledgment (d) Abstract	1
vi.	The following question contains an Assertion followed by a Reason. Read them carefully and select the option that best describes the two statements: Assertion(A): You want to provide references for sources that you have used in your writing because it is the ethical thing to do. Reason(R): It is not fair to use anyone else's words and/or ideas as if they were your own.	1

	<p>(a) Both assertion and reason are correct, and the reason is the correct explanation of the assertion.</p> <p>(b) Both assertion and reason are correct, but the reason is not the correct explanation of the assertion.</p> <p>(c) Assertion is correct, but the reason is not correct.</p> <p>(d) Assertion is incorrect, but the reason is correct.</p>	
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Q. 5	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	<p>What is the full form of APA format?</p> <p>(a) American Publishing Agency</p> <p>(b) American Psychological Association</p> <p>(c) Academic Press Association</p> <p>(d) Association of Psychological Authors</p>	1
ii.	<p>_____ are the abilities and qualities necessary for creating and delivering a compelling presentation that effectively communicates information and ideas.</p> <p>(a) Presentation techniques</p> <p>(b) Communication barriers</p> <p>(c) Writing skills</p> <p>(d) Listening strategies</p>	1
iii.	<p>In which phase of DTI will you make a summary and presentation?</p> <p>(a) Analyze</p> <p>(b) Observe</p> <p>(c) Reflect</p> <p>(d) Ideate</p>	1
iv.	<p>What is the first step for starting a new business?</p> <p>(a) Improving product / service</p> <p>(b) Understanding customer needs</p> <p>(c) Getting money and materials to start</p> <p>(d) Business idea</p>	1
v.	<p>A business where a seller and buyer exchange an item, which can be seen and touched, is called_____</p> <p>(a) Service business</p> <p>(b) Product business</p> <p>(c) Hybrid business</p> <p>(d) Virtual business</p>	1
vi.	<p>Visually pleasing all parts of the design work together as a whole is known as _____</p> <p>(a) Unity</p> <p>(b) Emphasis</p> <p>(c) Proportion</p> <p>(d) Contrast</p>	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.

Q. 6	List any two qualities of self-confident people.	2
Q. 7	Give any two uses of ICT at home.	2
Q. 8	List out any two input devices and two output devices.	2
Q. 9	What is entrepreneurship?	2
Q. 10	Give any four qualities of a successful entrepreneur.	2

Answer any 4 out of the given 6 questions in 20 – 30 words each (2 x 4 = 8 marks)

Q. 11	Who is a designer?	2
Q. 12	List out the important parts of a camera.	2
Q. 13	What do you mean by 'Principles of Design'?	2
Q. 14	Differentiate between primary research and secondary research.	2
Q. 15	Explain 'Narrative Charting' and 'Problem-Oriented Charting'.	2
Q. 16	What are Presentation techniques?	2

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

Q.17	<p><u>Case study</u></p> <p>A group of students noticed that their school canteen always gets crowded during lunch breaks, and many students waste time standing in long queues. They decided to use the 'Design Thinking Process' to find a solution to this problem. Identify and briefly explain the five phases of Design Thinking that the students should follow to solve this problem.</p>	4
Q18	<p><u>Case study</u></p> <p>A school art club is designing a new school logo and wants it to look naturally attractive and balanced. Their art teacher suggests using the Golden Ratio to plan the layout of the logo and its background. The students decide to explore how to construct a golden rectangle using a compass, ruler, and pencil before starting their design. Construct a Golden Ratio.</p>	4
Q.19	<p><u>Case study</u></p> <p>During a school renovation project, students were asked to design floor tiles for the new art room. The tiles needed to cover the entire floor without leaving any gaps or overlaps. The students explored tessellating patterns to find shapes that could fit together perfectly. They experimented with various geometric shapes, including triangles, squares, hexagons, and irregular polygons. Define tessellation and draw any two tessellating patterns.</p>	4

Q.20	<p><u>Case study</u> A group of students is working on a project to design a mobile app that helps students track their homework and study time. Before they start creating the app, they decide to have a conversation with potential users — other students and teachers — to understand their needs, preferences, and challenges. The team plans to prepare questions, listen carefully, and take notes to ensure their design meets user expectations. List down the basics to be considered while planning a conversation with the users.</p>	4
Q.21	<p><u>Case study</u> Students of class 9 have completed a science project on “The Importance of Renewable Energy.” As part of their project report, their teacher asked them to include an acknowledgement section to express gratitude to the people who supported them — such as teachers, parents, and friends. However, some students are unsure about the correct steps and format for writing an acknowledgement. Explain the steps involved in writing an acknowledgement for a project report.</p>	4
Q.22	<p><u>Case study</u> A group of Class 9 students is working on a project about “Healthy Eating Habits among Teenagers.” To begin their research, they decide to use different tools to collect and organize information.</p> <ul style="list-style-type: none"> • One student suggests creating a mind map to organize ideas like food groups, meal timings, and nutrition tips. • Another student recommends preparing a questionnaire to collect data from classmates about their eating habits and preferences. <p>Differentiate between a mind map and a questionnaire.</p>	4