S3 Visual Arts Practice Paper: Visual Elements and Principles of Design, Colour Theory, Drawing Techniques, Printmaking, Ceramics and Three-dimensional Form, Design and Art Appreciation

S3 | Visual Arts | Time: 75 minutes | Total: 100 marks | 24 questions

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Part 1: Visual Elements and Principles of Design

Answer in complete sentences or with accurate terminology.

1. List the seven visual elements. [4]

Answer: Line, shape, form, colour, texture, space and value (tone).

2. Explain the difference between symmetrical and asymmetrical balance, giving one example of each. [4]

Answer: Symmetrical balance gives equal visual weight on each side of a central axis, for example a frontal portrait with matching decoration on both sides. Asymmetrical balance uses unequal elements, such as a large light area against a small dark area, to achieve visual stability.

3. Explain how rhythm is created in a two-dimensional composition through repetition and gradation. [4]

Answer: Repetition places the same unit, line or colour patch repeatedly at regular or irregular intervals to set up a visual beat; gradation changes size, direction, spacing or value step by step so the beat advances continuously. Together they carry the eye from one point to another.

4. Compare the roles of emphasis and unity in a composition. [4]

Answer: Emphasis uses contrast in size, value, colour intensity or placement so that one area is seen first and fixes the entry point of the eye; unity makes the parts echo one another in colour, shape, brushwork or direction so the whole reads as one work. Emphasis creates tension, unity holds the picture together, and both must operate at once.

Part 2: Colour Theory

Show your working; give units or names in your answers.

5. Name the three primary and three secondary colours, and calculate how many hues there are on the 12-hue colour wheel. [4]

Answer: The primaries are red, yellow and blue; the secondaries are orange (red + yellow), green (yellow + blue) and violet (red + blue). Hues = 3 primaries + 3 secondaries + 6 tertiaries = 12.

6. How many complementary pairs are there on the 12-hue colour wheel? State the complement of red. [4]

Answer: Pairs = 12 / 2 = 6. Green lies six hues away from red on the wheel, so green is the complement of red.

7. Of the 12 hues, how many are warm and how many cool? Give one example of each and describe its visual effect. [4]

Answer: Six warm and six cool. Warm hues such as red and orange recall fire and sunlight and appear to advance and expand; cool hues such as blue and blue-green recall water and sky and appear to recede and contract.

8. Explain the difference between a tint and a shade, and state what is added to make each. [4]

Answer: A tint is made by adding white, which raises value and lowers intensity, giving a lighter colour such as pink; a shade is made by adding black, which lowers value, giving a darker colour such as maroon. Neither changes the underlying hue, only its tonal level.

Part 3: Drawing Techniques

Show working for calculations and give answers to 1 decimal place.

9. What do the H and B series of pencils indicate? In the set 6H, 4H, 2H, H, HB, B, 2B, 4B, 6B, how many grades are there in each series? [5]

Answer: H means hard: a hard, light core for fine lines and pale tones. B means black and soft: a softer, darker core for broad shadows and heavy lines. The set holds 4 grades of H (6H, 4H, 2H, H) and 4 grades of B (B, 2B, 4B, 6B), with HB in between.

10. How many vanishing points does one-point perspective have, and how many does two-point perspective have? What is the difference, and what is two-point perspective used to draw? [4]

Answer: One-point perspective has 1 vanishing point, two-point has 2, so the difference is 2 - 1 = 1. Two-point perspective is used for objects set at an angle to the picture plane, such as a building seen at a corner, whose two sets of parallel edges converge to two vanishing points.

11. Explain the difference between cross-hatching and stippling as tonal techniques. [4]

Answer: Cross-hatching layers two or more sets of parallel lines; the denser the crossing lines, the darker the tone. Stippling builds tone with dots, denser clusters reading darker. Hatching keeps clear directional lines; stippling gives a grainy texture with softer edges.

12. A canvas is 100 cm high. Using the golden ratio 1.618, calculate its width (1 decimal place). [4]

Answer: Width = 100 x 1.618 = 161.8 cm.

Part 4: Printmaking

Use correct terminology; show working for calculations.

13. Name the four printmaking categories relief, intaglio, planographic and stencil, and give one method for each. [4]

Answer: Relief: woodcut, ink on the raised surface. Intaglio: etching, ink held in the recessed lines. Planographic: lithography, working on oil-water separation. Stencil: screen printing, ink pushed through open mesh.

14. What does "3/25" written below a print mean? If the edition is 25 and 18 have been sold, how many remain? [4]

Answer: "3/25" means this is the third print of a limited edition of 25, after which the plate is cancelled, so each print counts as an original. Remaining 25 - 18 = 7 prints.

15. Explain where the ink sits in relief and in intaglio printing, and say which suits very fine lines. [4]

Answer: In relief printing the ink sits on the raised surface and the recessed areas stay blank; pressure transfers the raised ink. In intaglio the ink is packed into the incised lines, the surface is wiped clean, and heavy pressure lifts ink out of the grooves. Intaglio therefore holds very fine lines and subtle tonal range.

16. Printing 25 copies costs 3 dollars of paper each plus 40 dollars of ink in total. Calculate the total cost and the average cost per print (1 decimal place). [5]

Answer: Paper = 25 x 3 = 75 dollars; total = 75 + 40 = 115 dollars; average = 115 / 25 = 4.6 dollars each.

Part 5: Ceramics and Three-dimensional Form

Show working; give lengths to 1 decimal place.

17. Name the three basic hand-building methods and describe each briefly. [4]

Answer: Slab building presses clay into flat sheets that are joined; coiling rolls clay into ropes and stacks them; pinching hollows a ball of clay with the fingers.

18. Bisque firing is at 800 degrees C and glaze firing at 1,200 degrees C. Calculate the difference and state the purpose of bisque firing. [4]

Answer: Difference = 1,200 - 800 = 400 degrees C. Bisque firing drives off water and organic matter and hardens the body so it can be glazed and handled without breaking during the glaze firing.

19. A wet clay strip is 20.0 cm long and the firing shrinkage is 12 per cent. Calculate the fired length and the amount lost (1 decimal place each). [5]

Answer: Fired length = 20.0 x (1 - 12 per cent) = 17.6 cm; loss = 20.0 - 17.6 = 2.4 cm.

20. State two functions of glaze and say what happens if it is applied too thickly. [5]

Answer: First, firing fuses glaze into a glassy layer that makes the body watertight, so it can hold liquids; second, it adds colour, gloss or texture and gives a wipeable surface. Too thick a layer shrinks differently from the body and may crawl, run or flake off.

Part 6: Design and Art Appreciation

Show working; give answers to 1 decimal place.

21. List the four main stages of the design process. [4]

Answer: Define the problem and research, generate ideas and sketch, make a prototype or model, then test, evaluate and refine.

22. A2 paper measures 420 mm by 594 mm. Calculate its area in cm2, and the area of A3, which is half of A2 (1 decimal place each). [4]

Answer: A2 area = 42.0 x 59.4 = 2494.8 cm2; A3 area = 2494.8 / 2 = 1247.4 cm2.

23. A display wall is 1,200 cm long. With 60 cm left at each end, 24 works 30 cm wide are hung. Calculate the average gap between neighbouring works (1 decimal place). [4]

Answer: Usable length = 1,200 - 2 x 60 = 1080 cm; works occupy 24 x 30 = 720 cm; remainder = 1080 - 720 = 360 cm; number of gaps = 24 - 1 = 23; average gap = 360 / 23 = 15.7 cm.

24. List the four steps of art appreciation. [4]

Answer: Description (what is seen), analysis (how form and principles of design are used), interpretation (what the work may express) and evaluation (how far it succeeds, with reasons).
