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Second Year B.Des. (Set Design)
Materials and Construction - II (213564)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Draw neat diagrams wherever necessary.*

Q1) Write short notes about following (Any 5): **[30]**

- a) M.D.F as material in set design.
- b) Write about manufacturing process of glass.
- c) Uses of acrylic.
- d) Characteristics of good timber.
- e) Anneling.
- f) Types of acrylic.

Q2) Explain the following terms with sketches and different patterns (Any 3): **[30]**

- a) Flemish bond.
- b) Any two widening joints.
- c) Metal window.
- d) Framed door.

Q3) Explain the following terms (Any 5): **[20]**

- a) Header.
- b) Queen closure.
- c) Knot.
- d) Mortise and tenon joint.
- e) Five varieties of trees that used in carpentry work.
- f) Heath shake.

Q4) Answer the following with appropriate sketches (Any 5):

[20]

- a) What is star shake?
- b) What do you mean by shoulder joint?
- c) Why wood is considered as important material in set design?
- d) Explain importance of seasoning.
- e) Explain angle joint with any two examples.



Total No. of Questions : 5]

[Total No. of Pages : 2

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Second Year B.Des. (Set Design)

History of Architecture - II

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) All questions are compulsory.***
- 2) Figures to the right indicate the marks.***
- 3) Illustrate with sketches wherever necessary.***

Q1) Explain stages of evolution in brief of Temple with necessary sketches w.r.t. plan and other design elements. **[15]**

OR

Explain the development and types of the rock cut architecture in Buddhist period. **[15]**

Q2) Write short notes on (Any Four): **[20]**

- a) Kudu.
- b) Shikara.
- c) Antarala.
- d) Mandapa.
- e) Prakara.

Q3) Explain with sketches (Any Four): **[20]**

- a) Buddhist Columns.
- b) Dravidian Column.
- c) Chaitya.
- d) Kunda in Hindu temples.
- e) Gopuram.

P.T.O.

Q4) a) Explain various motifs round on the shikhara of a temple of Dravidian type. [10]

b) Explain the difference between the Nagara / North Indian style and dravidian style of columns with sketches. [15]

Q5) Explain: [20]

a) Choumukhi temple with example.

b) Chaitya halls.

c) Stupa.

d) Kailas temple at Verul.

e) Teli ka Mandir, Gwalior.



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T.Y. B.Des. (Product Design)
MATERIALS & PROCESSES - IV

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Attempt any five questions.*
- 2) All questions carry equal marks.*

Q1) Explain with sketch-Metric and British screws, machine screws and self-tapping screws. Also explain Philips head, star head and wood working screws.

Q2) Explain spin welding with sketch of product and machine, suggest a suitable product to exploit this technology for benefit of end user.

Q3) Describe Hot plate welding process with its parameters and features. Explain the advantages, disadvantages and application of this process.

Q4) Ultrasonic welding is very useful for product assembly process. Explain this with the help of a suitable product design. Explain the process and its horn design. Suggest suitable polymer for your design.

Q5) Write short on the following:

- a) Standard design.
- b) Flush design.
- c) Spherical design.
- d) Knurled design.

Q6) Explain grinding, buffing, electro plating and powder coating. Explain any two in detail.

Q7) Write short notes on:

- a) Horn material.
- b) Longitudinal waves.
- c) Transverse waves.
- d) Curved waves.



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Second Year B.Des. (Product)

Materials & Processing - II

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Attempt any 2 questions from Section - I & attempt any three questions from Section - II.*
- 2) Each question carries 20 marks. Out of which 5 marks is for process explanation, 5 marks for process sketch, 5 marks for a suitable product design & 5 marks for advantage, disadvantage & benefit to the user.*
- 3) Figures to the right indicate full marks.*

SECTION - I

[2 x 20 = 40]

Q1) Blow moulding.

Q2) Flip top cap for a Skin cream tube.

Q3) Injection moulding.

Q4) Vacuum forming.

SECTION - II

[3 x 20 = 60]

Q5) Explain ferrous/non ferrous material. Also explain, how based upon carbon percentage, steel is defined. Explain the application of each grade of steel.

Q6) Design a cold drinks bottle cap, specify the product requirements and suggest the polymer material, Explain how the specific properties of polymer are fulfilling your design requirement.

Q7) Define grades of stainless steel and its application. Explain the composition to understand how the property of stainless steel is obtained in the material.

P.T.O.

Q8) Explain in brief (any four):

- Property and application of PP.
- Property and application of Acrylic.
- Rotational moulding.
- Transfer moulding.
- Properties of polymer.
- Extrusion process.



Total No. of Questions : 7]

[Total No. of Pages : 2

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S.Y. B.Des. (Product Design)
HISTORY

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Figures to the right indicate full marks.*

Q1) Explain the need to study Design history. What role did the mechanisation and assembly line production play on the aesthetics of new age products. **[15]**

OR

Name the Classical civilizations. During which of these periods did architecture reach its peak. Write about the sculpture and architecture of this period giving examples.

Q2) Write short notes on any 5 the following: **[25]**

- a) Realism.
- b) Art Deco.
- c) Rococo.
- d) Expressionism.
- e) Stone age art.
- f) Renaissance.

Q3) Write short notes on Minimalism, Op-art and Bauhaus. **[16]**

OR

Write short notes on the Arts and Craft Movement and any two famous designers of this period.

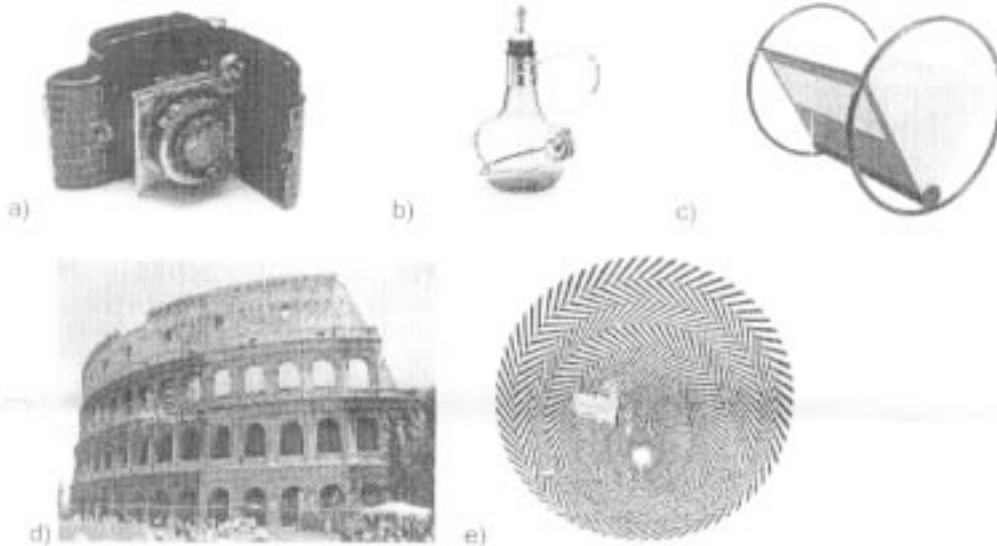
Q4) Explain any 2 of the following terms: **[4]**

- a) Chiaroscuro.
- b) Frescos.
- c) Illuminated manuscripts.

P.T.O.

Q5) Write short notes on the inspirations of Art Nouveau, Streamlining and pop-modernism. [15]

Q6) Identify the movement or period that the following images relate to and name the artist/designer who worked on them. [10]



Q7) Taking any product into consideration, explain the evolution of the product from its origin taking into consideration, the materials, form and aesthetics of the product. [15]

OR

Describe Modernism as a movement and the change it brought about in the way people started looking at aesthetics of products in the mechanised age.



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Second Year B.Des. (Product Design)
ERGONOMICS - II

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) All questions are compulsory.*
- 2) Figure to the right indicate the marks.*
- 3) Illustrate with sketches wherever necessary.*

Q1) Write short notes on any four: **[20]**

- a) Impact of Industrial revolution on the working style of the workers in the industry.
- b) Cognitive Ergonomics.
- c) Rotatory selector switches.
- d) Man Machine interface.
- e) Importance of Ergonomics in design process.

Q2) What are Controls? Elaborate different types of controls and their application area with sketches. **[20]**

Q3) Redesign the grip of a hammer and elaborate with the task analysis the issues of the grip with adequate sketches (Give dimension to your final solution). **[20]**

Q4) What is Ergonomics and its different types? Elaborate with examples. **[20]**

Q5) What is Material handling? Elaborate with example of your choice the concerns, issues and solutions of the same. **[20]**

OR

Elaborate the factors which determine the design and selection criteria of an control for a given application. Give examples.

