Government Institute of Printing Technology, Mumbai

Odd term and theory examination Dec. 2023

Course: Printing Processes   Code: K104

Duration: 03.00 Hours   of Marks:70

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1. Answer the following questions. (Any 5)   **10**
a. State two advantages of print media.
b. Write two types of binding styles.
c. Write names of two printing machine manufacturing companies.
d. Write two types of feeding system in offset printing machine.
e. State the consumable used in pre-press (any two)
f. Write any two types of graphic original.
g. Write two limitations of print media.

Q2 Answer the following questions. (Any 3)   **12.**
a. Describe any two finishing operations.
b. Differentiate between sheetfed and web fed press (up to 4 points).
c. Explain two characteristics of image carrier.
d. Write stages of prepress.
e. Write additive and subtractive color theories (up to 4 point).

Q3 Answer the following questions. (Any 3).   **12**
a. Differentiate print media and non-print media up to four points.
b. Explain CTP machine with schematic diagram.
c. Describe any two-image carriers for conventional printing process.
d. Explain Ream, Quire, Gross and GSM.
e. Explain the working principle of flexography and offset.

Q4 Answer the following questions. (Any 3)   **12**
a. Write the paper sizes in mm of the following B0, A4, C3, B5.
b. Draw a schematic diagram of common impression cylinder configuration of printing machine.
c. Describe chemical used in CTP with their functions. (Any two)
d. Write two consumables and equipment used to prepare image carrier for screen printing.

Q5 Answer the following questions. (Any 3)   **12**
a. Differentiate impact and non-impact printing up to four points.
b. Describe RIP process briefly.
c. Write basic characteristics of image carrier required for offset & gravure printing process.
d. Explain 4 units of sheetfed offset machine.

Q6 Answer the following questions. (Any 3)   **12**
a. Explain four different applications of printing industry.
b. Describe the meaning of color correction.
c. Explain the classification of image carrier.
d. Write four components of printing ink.
e. Write 4 basic unit of Gravure machine with their function.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Dec 2023

Course: Printers Mathematics   Code: K106

Duration: 03.00 Hours   Marks:70

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary.
4. Use of non-programmable calculator is permitted.

Q1. Answer the following questions. (Any 5)   **20**

a. Rate of printing is Rs 5000 for 1250 copies. By same proportion, find the cost to print 25000 copies.

b. Average speed of local train is 72 KMPH find the distance covered by it in 45 minutes.

c. Find the simple interest for the capital required to purchase screen printing machine. Rate of interest = 12% per year, Capital = Rs 1,00,000 and time is 2 years.

d. Find compound interest if rate is 15% per year, capital is Rs. 15,00,000 and time is 15 years.

e. Find surface area of a cube having side 10 cm

f. State Simpson's one third rule.

g. Find the mean of following reading which indicate number of impression per hour by Sheetfed offset printing machine- 12000,14000,18000,16000,15000.

Q2 Answer the following questions. (Any 3)   **12.**

a. Total 28000 posters are to be printed. This job is distributed on 4 printing machines in the proportion of 5:2:4:3. The machine are Omet, MarkAndy, Nilpeter and Gidue respectively. Find number of copies of poster printed by the Nilpeter machine.

b. An offset plate has length 23" and width 18". Rate of coating it is Rs 2 per square inch. Find the cost required for coating of 500 such plates.

c. Cost of scanning is Rs 1.5 per square cm. 150 documents of size 10 cm X 15 cm are scanned. 20% profit is added on the total cost of scanning. Find the amount of profit.

d. Draw a bar graph based on following data.

Month	Jan	Feb	March	April
No.of working days	24	21	26	18

e. Draw a bar graph based on following data

Year	2018	2019	2020	2021
No. of students passed	75	78	96	77

Q3 Answer the following questions. (Any 3).   **12**

a. A gravure machine prints 54 Km length of PVC in one hour without stopping and prints 45 km in one hour with stopping of machine. Find out for how many minutes does the machine stop.

b. The compound interest on Rs 30,000 at 7% per year is Rs 4347. Find the period in years.

c. A printer is bought at Rs. 2500. It is required by giving Rs. 250. Then it is sold at 15% profit. Find selling cost of the printer.

d. Define – i) Coefficient of range for discrete data ii) Range

e. Explain the meaning of pie chart with example.

Q4 Answer the following questions. (Any 3)   **12**

a. Find the simple interest at the rate of 24% per year on amount Rs.10,000 for 25 years

b. The gravure image carrier is cylindrical in shape. Find its surface area and volume, if radius is 7cm.

c. Calculate depreciation on printing machine value (straight line method). Rate of depreciation is 10% per year, purchase value is Rs 20,00,000 and time is 5 years. Write amount of depreciation.

d. Find the mode of the following data

Class Internal	0-10	10-20	20-30	30-40	40-50
Freq	12	16	6	7	9

Q5 Answer the following questions. (Any 3)   **12**

a. Virat can do a work in 15 days. Siraj in 20 days. If they work together, how many days will be required to complete a work.

b. A box has length 10 cm, width 2 cm and height 4 cm. find its surface area and volume.

c. Flexography plates were purchased at Rs 50,000 for 100 plates of 20 cm X 30 cm. Then each plate was cut in 4 equal pieces and such pieces of all the plates were sold at Rs 150 per piece. Find whether it is profit or loss and write the total amount of profit or loss.

d. Define mode and median.

Q6 Answer the following questions. (Any 3)   **12**

a. Find compound interest at rate 12% per year for 9 years on amount Rs 1,08,000.

b. Ahmed purchase 20 kg ink of the rate of Rs 275 per kg. He added 5 kg thinner in it and sold the mixture at Rs 325 per kg. Calculate the amount of profit.

c. When a ream of paper is sold for Rs 2040 there is a loss of 15%. At what price must this ream of paper be sold to get 20% profit.

d. Find the mean and median from the following data
    200, 210, 215, 205, 210, 217, 211, 210, 205, 203.

e. Draw a line graph, using following data :

Dot %	10	20	30	40	50	60	70	80	90	100
Dot gain	12	22	39	51	65	62	75	75	65	85

Government Institute of Printing Technology, Mumbai
Odd term and theory examination Dec 2023

Course: Communication Skill (English)　　　　　　　　　　Code: K101

Duration: 03.00 Hours　　　　　　　　　　　　　　　　　　Marks:70

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1　Do as directed (any five)　　　　　　　　　　　　　　　　　　　10

a. i) _____ advantage ii) diction_____ (add Prefix and Suffix)
b. Moody (Write any two synonyms of the given word)
c. Appear (Write any two antonyms of the given word.)
d. I saw _____ bird sitting on _____ tree in front of my house. (Rewrite the sentences use articles.
e. The supermarket will be closed _____ 9 p.m. (Rewrite the sentences use Prepositions)
f. _____ the cupcakes ___ the cookies had fallen from the table. (Rewrite the sentences use conjunctions)
g. He said, "I have passed the physical test." (Change into indirect speech)

Q2　Attempt any three of the following.　　　　　　　　　　　　　　12

a. Mention the statement which indicates that we should avoid doing many things simultaneously.
b. Write your opinion on 'Peace of mind'.
c. Explain the importance of believing in one self.
d. Describe the physical loss to Arunima Sinha as a result of the attack.

Q3　Attempt any three of the following.　　　　　　　　　　　　　　12

a. Write a technical description of tablet PC.
b. Write a technical description of smart watch.
c. Write a paragraph on "Time management"
d. Write a paragraph on "An accident I witnessed"

Q4　Attempt any three of the following.　　　　　　　　　　　　　　12

a. Make a sentence using following collocations i) Do harm ii) Do exercise iii) Make a promise iv) Make a complaint
b. Make two sentences using the given homophones i) Higher, hire ii) Weak, week
c. Write the meaning of following idioms and make a sentence of your own. i) Beside yourself with joy ii) fair and square
d. Change the voice.
i). The player is taking extra time.
ii). Sam had taken the medicines.
iii). The restaurant was renovated by me in 2004.
iv). A manager will give you ticket.

Q5　Attempt any two of the following.　　　　　　　　　　　　　　12

a. Develop a dialogue between two friends about the movie watched recently.
b. Develop a dialogue between to friends about the Indian education system.
c. Draft a welcome speech for chief guest by the principle at annual day.
d. Write a diary entry for a significant day of your life.

Q6 A) Read the following passage and answer the given questions. **12**

Nitrogen is perhaps the most vital of all the nutrients that plants need. It governs crop growth, yield and ultimately productivity. The most crucial ingredient of India's green revolution for example was the availability of nitrogenous fertilizers. Of course, other inputs such as insecticides and pesticides were important too. In fact, next to carbon, nitrogen is perhaps the most important element for life on earth. But getting enough of it has been a perennial problem for all living things. Nitrogen deficiency is one of the leading causes of malnutrition in both plants and animals. That where the paradox lies, we are immersed in an atmosphere, that is almost 80 percent nitrogen but the problem is how to 'fix' nitrogen to convert it into a usable compound for making fertilizers. Man learned to control this inert element only around the beginning of this century. The breakthrough come when two German scientists demonstrated a simple method for fixing atmospheric nitrogen.

Questions-

i). Explain nitrogen deficiency and its consequences.
ii). State the importance of nitrogen.
iii). Mention a crucial factor in India's green revolution.
iv). Explain in the role of nitrogen in plant development and productivity.

B) **attempt any two of the following** **04**

i). Write any two examples of negative or positive postures.
ii). State the importance of oral communication for an engineering professional.
iii). He (look) very nervous when I (meet) him yesterday. (Use appropriate form of the verbs given in the brackets)

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Communication Skill   Code: M102

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Answer any five questions.   **20**
   a. What is communication? Explain the communication cycle.
   b. Differentiate between oral and written communication.
   c. How do your prejudices, opinions and beliefs influence communication?
   d. Explain the principles of effective communication.
   e. Elaborate the four zones of proxemics defined by Dr. Albert Mehrabian.
   f. What is the importance of good listening skills in engineering career2222?
   g. State the factors to be considered while using graphical communication.

Q2 Write an essay in about 250 words (any one)   **12**
   a. Women empowerment
   b. A week without internet and technology.
   c. The day you decided to change your life.

Q3 Answer any two questions   **12**
   a. Your company has not been able to meet the production target for the month because of expensive causal leaves of the workers. As a manager, draft a memo warning the workers that if this trend continues their bonus will be reduced.
   b. Draft a notice as the principal of your institute informing the first-year students about an industrial visit arranged by the college.
   c. While handling the welding machine, a trainee students sustained serious burns. As a supervisor in charge of the welding workshop, draft a suitable report for submission to the head of your institute.

Q4 A) Answer the following question.   **06**
   i. Write a letter of application along with a resume to Precision Automobile Industry, Pune 01 for the post of Junior Engineer.

                              OR

   ii. You want to purchase some electrical equipment for your workshop. Write a letter of inquiry to Hindustan Electrical Appliances Co.Ltd. Mumbai.

   B) What are the steps of paragraph writing?   **06**

Q5 A) Read the following passage carefully and answer the question   **08**
   Machine were made to be man's servants, yet he has become so dependent on them that they have become his masters. And machines are very strict masters. They must be fed with coal and given petrol to drink and oil to wash with, and they must be kept at the right temperature. If they do not get their meals when they need, they grow resentful and deny to work or burst with rage and blow up and spread damage and destruction all around them. So we have to wait upon them carefully and do all that we can to keep them in good temper. Already we find it hard either to work or play without machines, and time may come when they will rule us altogether, just as we ride the animals. Machines save time and energy for us but we use them for making more and improved machines. We must remember that machine themselves or the power that machines have given us are not civilization, but aids to civilization. Real development will come only when we learn to use these machines as instruments in the service of humanity at large and stop them from being a means of luxury and power for a few.

Questions

1. How are we required to look after machines?
2. What happens when machines are neglected?
3. When do machines become a curse to mankind?
4. When can we have a real civilization?

B. Attempt a summary of the above passage and suggest a suitable title   **04**

Q6 Answer the following questions   **08**

    A) Draft a speech to be delivered on the importance of environment.

<p align="center">Or</p>

    B) As the in charge of the annual social gathering of your institute, prepare a vote of thanks for the event.

    B) Write short notes on.   **04**

       I.   Computer

      II.   Mobile

<p align="center">---</p>

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Basic science   Code: M103

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Answer any five questions.   **20**

a. Define and explain refraction with suitable labelled diagram.
b. Write a long form of LASER. State any three characteristics of LASER.
c. Define and explain capillary action / capillarity with suitable diagram.
d. Differentiate between strong acid and weak acid.
e. Define and explain Lewis concept of acid.
f. Write any four assumption of Arrhenius theory of electronic dissociation.
g. State and explain Faraday's second law of electrolysis. With suitable diagram.

Q2 Answer any two questions.   **12**

a. Differentiate between fundamental quantity and derived quantity. (Any 3 point).
b. Define energy and state laws of conversation of energy.
c. State and explain Snell's law of refraction with suitable labelled diagram.

Q3 Answer any two questions.   **12**

a. Define Unit. State any five requirements of standard unit.
b. State and explain Newton's second law of motion with derivation of F=ma.
c. State and explain angle of contact with suitable labelled diagram.

Q4 Answer any two questions.   **12**

a. Differentiate between accuracy and precision (any three points).
b. State any six applications of LASER.
c. Define viscosity. State and explain Newton's law of viscosity.

Q5 Answer any two questions.   **12**

a. Define and explain polarization with suitable labelled diagram.
b. Write the limitations of Arrhenius concept of acid and base.
c. When an electric current was passed through a solution of silver nitrate for 45 minutes, 8.0 grams of silver was deposited at the cathode. Calculate the strength of the current. (E.C.E. of Silver = 0.001118 gm)

Q6 Answer any three questions   **12**

a. Define and explain diffraction with suitable labelled diagram.
b. State and explain Stokes's law.
c. Define PH. Explain PH scale with suitable labelled diagram.
d. Differentiate between strong base and weak base.
e. Define electroplating. Explain silver plating with suitable labelled diagram.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Basic Engineering	Code: M104
Duration: 03.00 Hours	Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following.   **20**

a. State Kirchoff's current and voltage law.
b. Define hydraulics and state any two applications used in printing.
c. Explain Pascal's law. With example.
d. State Charle's law.
e. State 2 differences between good conductor and insulator.
f. Explain single acting compressor with neat labelled diagram.
g. What is leakage current & insulation resistance?

Q2 Attempt any two of the following.   **12**

a. State and explain mechanical advantages related to hydraulic mechanism.
b. Compare individual drive and group drive (any 6 point).
c. Explain laws of friction with diagram, formula and example.

Q3 Attempt any two of the following.   **12**

a. Explain centralized & decentralized compressed air system.
b. Draw diagram of belt, rope, chain drive.
c. List types of lubrication & explain anyone.

Q4 Attempt any two of the following.   **12**

a. Explain star and delta transformation with formula.
b. Explain cams and follower in drive.
c. Describe ohm's law.

Q5 Attempt any two of the following.   **12**

a. Write the characteristics of gear and explain them with gear drive diagram. i) Addendum ii) Dedendum iii) Pitch circle iv) Velocity ratio
b. Explain the nature of voltage and current in the circuit.
c. Explain advantages and disadvantages of ropes and gear drives.

Q6 Attempt any two of the following.   **12**

a. Explain Boyle's law. Also define the pneumatics with proper example.
b. Explain hydraulic system with block diagram.
c. Compare DC series circuit with DC parallel circuit.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Printer's Mathematics   Code: M106

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:

1. Attempt all questions and assume suitable data if necessary.
2. Figures to the right indicate full marks.
3. Use of non-programmable calculator is permissible.

Q1 Attempt any five of the following.   **20**

a. Find the mean of -19,28,36,43,54,61,72,85,97,19.
b. Find the simple interest, if principal amount is Rs. 50,000. Rate of interest = 12%, Period = 2 years.
c. The marks in math's are given in the following table, find the mean.

Marks	75	85	65	95	40
No of students	10	05	25	05	15

d. Find the volume of the cube having side 12.7m.
e. Find the selling price of 1 dozen pens, if one pen costs Rs 65 and expected profit is 40%.
f. A train covers 35 km in 35 minutes. Find its speed in kmph. Also find the distance covered by it in 2 hours.
g. Find the volume of cylinder having radius $\sqrt{7}$ m and height 6 m.

Q2 Attempt any three of the following.   **12**

a. Divide Rs 1500 among P,Q,R,S in the ratio 22:11:33:34.
b. Find the simple interest on Rs 1,50,550 for 3 years at rate 15%.
c. A printer is purchased at Rs 2750 & sold at 20% profit. Find total profit if 15 such printers are sold.
d. Find the volume of water filled in cuboid having length 2m, width 1500mm, height 300 cm.
e. Find the median -23,05,22,26,18,17, 30,19, 24,13.

Q3 Attempt any three of the following.   **12**

a. Cost of 1 ream of paper is Rs 280. For a certain job 12500 papers were used. Find cost of these papers.
b. Write the formula to calculate compound interest.
c. Find the volume of cone of radius 10 cm & height 14 cm.
d. An athlete runs around circular ground having radius 14 m. How many rounds he should complete to cover a distance of 1760 m.

Q4 Attempt any three of the following.   **12**

a. A set of earphones is priced at Rs 1650. Find its selling cost at a discount of 25%.
b. Rate of printing 1000 sheets in 1 color from 1 side is Rs.100. Find the cost required to print 2000 sheets from both sides in two colors.
c. Virat can paint one house in 2 days. Rohit can paint it in 4 days. How many days are required to paint 8 such houses if Virat and Rohit work together.
d. Find the mean, mode & median- 27,25,28,27,26,27,24,22,29,27.
e. Find the simple interest for 10 years if rate is 18%, principal is Rs 10,000.

Q5 Attempt any two of the following.   **12**

a. Machine can print 1,00,000 copies in 8 hours, machine B can print 1,50,000 copies in 8 hours and machine C can print 2,00,000 copies in 8 hours. If all three machines work together, then how many hours are required to print 70,00,000 copies.
b. Draw a bar graph from the following .

Marks Students	Maths	English	History	Science
Virat	97	82	74	85
Rohit	79	80	94	90

c. Draw a pie chart from the following.

Type	Male	Female	Children
Number	150	120	90

Q6 Attempt any two of the following. 12

a. Weight of one newspaper is 90 gm. Rate of waste paper (raddi) is Rs 12 per kg. Find out cost of waste paper for March, April and May (3 months).

b. Find the compound interest for 5 years at 10% p.a for RS 10,00,000.

c. Find mean, mode and median for – 1250, 2230, 2700, 2400, 1750, 1250, 1500, 1900, 2350, 2900.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Basic Prepress	Code: M202
Duration: 03.00 Hours	Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Solve any five questions.   **20**
a. Define wavelength and frequency. Write wavelength range of human vision.
b. List 2 applications each of additive and subtractive color theory.
c. List 4 requirements of good graphic original.
d. Differentiate conventional original from digital original up to 4 points.
e. Define magnification. If magnification is 200%, what will be the new width?
f. Compare between physical and digital storage media up to 4 points.
g. Define dpi, ppi, lpi and focal length of lens.

Q2 Solve any three questions.   **12**
a. Write 4 characteristics of SD card storage medium.
b. What is lens aberration? List any 2 of them.
c. Define depth of focus, depth of field, real image and power of lens.
d. Define opacity and optical density
e. Write 4 characteristics of line original.

Q3 Solve any three questions.   **12**
a. List 4 characteristics of recording media. List 2 examples.
b. What is lens flare? List its causes and remedy.
c. Compare between digital photography and conventional photography up to 4 points.
d. If output size is 400cm X 400cm and input size is 100cm X 100cm. find magnification and magnification factor.
e. If $\frac{I}{f} = \frac{I}{u} + \frac{I}{v}$, u= 10cm and v= 10cm find f?

Q4 Solve any two questions.   **12**
a. Define original explain any 3 originals with their characteristics.
b. With neat diagram, explain construction and working of digital camera. Also write its 2 advantages.
c. What is the use of screen angle? Write screen angles for 4 color printing job.

Q5 Solve any two questions.   **12**
a. With neat labelled diagram, explain additive theory of color reproduction.
b. With neat labelled diagram, explain construction and working of color densitometer.
c. Compare printed newspaper with online digital newspaper up to 6 points

Q6 Solve any two questions.   **12**
a. With neat labelled diagram, explain subtractive color theory of color reproduction.
b. Compare AM with FM screening up to 6 points.
c. List any 6 instruments or machine used in prepress department. Explain any one of them.

Government Institute of Printing Technology, Mumbai
Odd term and theory examination Oct 2023

Course: Binding & Finishing   Code: M203

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following.   **20**
a. Write any 2 purpose of binding and 2 main advantages of inline binding.
b. Write 2 advantages and 2 limitations of ISO paper sizes.
c. Draw schematic diagram of cutting operation on a single knife Guillotine Machine and show at least its 4 major parts.
d. What are the 4 differences of Three Knife Trimmer in comparison to single knife guillotine.
e. Draw schematic diagram of two principles of folding paper by machine and indicate its parts.
f. Name any four major parts of single clamp Adhesive / Perfect Binding machine along with its function.
g. What is Lamination? what are the types of Laminations ? Write it's working.

Q2 Attempt any two of the following.   **12**
a. What are the three different types of adhesives? Write its suitability with respect to adherer of each one.
b. What are 3 main advantages and 3 disadvantages of a Three Knife Trimmer.
c. What is the purpose of Die cutting? What is Half cut and Full /Through cut with respect to Punching. Illustrate your answer.

Q3 Attempt any two of the following.   **12**
a. Write 2 properties of any 3 types of board.
b. Write working of gathering machine and mention at least its 3 main parts along with its function.
c. Draw a diagram of case and write sequence of operations performed on Case Making Machine.

Q4 Attempt any two of the following.   **12**
a. What are different parameters in selection of appropriate securing material for Binding? Give specific example.
b. What are limitations and advantages of combination folding machine?
c. Distinguish in between punching with flat die and rotary die.

Q5 Attempt any two of the following.   **12**
a. How to choose adhesive? Which adhesives are recyclable? Write names of 3 different types of adhesives.
b. Describe any two safety provisions on single knife guillotine machine?
c. What is the average speed of Adhesive / Perfect binding machine with 6 clamps? How it's quality of Binding is assured?

Q6 Attempt any two of the following.   **12**
a. Write any 3 problems occurred during paper folding with the help of machine. Also write solutions of the same process.
b. Write working of Book sewing machine and its application.
c. Explain any three In-line finishing operations.

Government Institute of Printing Technology, Mumbai
Odd term and theory examination Oct 2023

Course: Printing processes I   Code: M204
Duration: 02.00 Hours   Marks:40

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any four of the following   **16**
a. Define print media and write two advantages of print media.
b. Name the two materials used and two chemicals used in plate making.
c. Write components of an ink and their functions.
d. Draw a diagram of single-color offset press and name its parts.
e. Name the raw materials used in binding.
f. Name the four paper manufacturing companies.

Q2 Attempt any three of the following.   **12**
a. Write different units of offset press and their functions.
b. Describe working of plate processor.
c. Define substrate. Write two names of absorbent substrate.
d. Write four names of leading printing presses.

Q3 Attempt any three of the following.   **12**
a. Write names of conventional printing processes and its applications.
b. Write types of originals and explain anyone.
c. Write the names of base materials used for offset plate making (any four).
d. Describe waterless offset and state two advantages of waterless offset.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Printing Process -II	Code: M205
Duration: 02.00 Hours	Marks:40

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any eight of the following.   **16**
a. Write two advantages of flexography.
b. Name any two fabrics used for silk screen making.
c. Write two advantages of ISO paper sizes.
d. Write working principle of gravure process.
e. Define relief printing.
f. Write two advantages of electrophotography.
g. Define RIP.
h. Write applications of digital printing.
i. Name two software used for graphic design.
j. Write two limitations of screen printing.
k. Write two applications of gravure printing.
l. Write the following paper sizes i) Foolscape ii) Demy.

Q2 Attempt any three of the following.   **12**
a. Describe relief image carrier with diagram.
b. Write four advantages of gravure printing.
c. Write working principle of digital printing and two applications of it.
d. Name the four requirements of silk screen printing.
e. Write purpose & four applications of graphic software.

Q3 Attempt any three of the following.   **12**
a. Compare relief printing process with gravure printing process.
b. Draw a diagram of gravure printing unit and name its part.
c. Write the types of stencils and explain anyone.
d. Describe electrophotography process with diagram.

Government Institute of Printing Technology, Mumbai
Odd term and theory examination Oct 2023

Course: Printing Material Science   Code: M207
Duration: 03.00 Hours   Marks:80

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following.   **20**
a. Define cellulose fiber. State 2 different sources of cellulose fiber.
b. Define and explain grain direction of the paper.
c. Write 4 properties of security paper.
d. Write 4 factors affecting the cost of paper.
e. Define and explain thixotropy property of ink.
f. Define and explain lightfastness property of ink.
g. Describe the theory of oxidation behind ink drying.

Q2 Attempt any two of the following.   **12**
a. Define pulp. Explain mechanical pulp process.
b. Define i) gloss ii) opacity iii) whiteness of paper.
c. Define pigment. Compare organic pigments with inorganic pigment. (upto 4 points)

Q3 Attempt any two of the following.   **12**
a. What is Green printing? State any five strategies of green printing.
b. Define the term i) grammage ii) caliper iii) bulk of paper.
c. Define vehicle. Explain drying vehicles and non-drying vehicles.

Q4 Attempt any two of the following.   **12**
a. What is recycled paper. State the advantages of recycled paper.
b. Describe the effect of moisture on board and its consequences on printability.
c. Define solvent. Write the significances of different solvents with example.

Q5 Attempt any two of the following.   **12**
a. Write the purpose of coloring materials and bleaching materials.
b. Explain the three-roll mill of paste ink manufacturing.
c. Write the general formulation of offset-ink and write the function of each ingredient.

Q6 Attempt any two of the following.   **12**
a. Write two properties of i) food grade paper ii) tissue paper iii) cigarette paper
b. Explain rub and scuff resistance properties of ink.
c. Define the following types of inks with example. i) OCR ink ii) Thermochromic ink iii) Water sensitive ink

----

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Image Carrier Plano   Code: M209

Duration: 02.00 Hours   Marks:40

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Answer any Four.   **16**
a. State purpose of imposition and write its definition.
b. Explain necessity of graining.
c. Write use of i) Gum Arabic ii) Plate finisher.
d. Explain spectral emission characteristic of light.
e. Write two optical and physical requirements of photographic film.
f. Write four advantages of waterless plate.

Q2 Answer any Two.   **12**
a. Write one chemical & physical property each of coating. Write name of 4 contents.
b. Describe any two quality tests performed on plate coating.
c. Write 3 characteristic of each i) PS plate ii) CTP plate.
d. Explain PH and specific gravity and importance.

Q3 Answer any Two.   **12**
a. Describe stages of negative PS plate making.
b. Describe working of auto plate processor.
c. State optical and physical requirements of film.
d. State work flow of CTP process.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Printing Material Handling & Maintenance   Code: M210

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following.   **20**
a. Name any four different waste generations in the web & sheet printing press.
b. Name any four transportation equipment used in printing press.
c. How the pallets are stored in printing press? Draw the schematic diagram of any one type.
d. Where FIFO & LIFO abbreviations are used? State its meaning.
e. Describe the meaning of maintenance & state its importance?
f. What is pallet, name two different types of pallet design.
g. What is lubricant and name the two different types of lubricants.

Q2 Attempt any two of the following.   **12**
a. How the efficiency of printing machine will increase for production? What will be the effect on costing?
b. What is a purpose of warehouse? Write any 4 points about good warehouse.
c. How to reduce waste generation in printing press & post press department. State 3 points.

Q3 Attempt any two of the following.   **12**
a. Name the two different stacking machinery and explain any one with schematic diagram.
b. Name the types of maintenance. Explain any one with its importance.
c. Explain the bearing function. Draw any one type of bearing.

Q4 Attempt any three of the following.   **12**
a. Explain the TPM with its 2 important points.
b. How to select a printing machine to be purchased. (write six points)
c. Explain the meaning of AGV.

Q5 Attempt any two of the following.   **12**
a. Name the types of maintenance. Explain any one type of maintenance.
b. What is a lubricant. Name four different types of lubricants used.
c. Name the equipment used to handle web material. Draw a schematic diagram of any one.

Q6 Attempt any two of the following.   **12**
a. Write any three reasons for bearing failure.
b. What is meant by the surface tension and viscosity of lubricant?
c. Name the safety features of warehouse and lighting arrangements. (any four)

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Color Essentials   Code: M211

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary and use of non-programmable calculator is permitted.

Q1 Attempt any ten of the following.   **20**

a. List color temperature of 2 light sources.
b. List 2 examples of hue of a color.
c. State electromagnetic spectrum range of human color vision.
d. List 3 attributes of color.
e. Write 2 primary lights of additive color theory.
f. Write function of light sensitive rods present in human eye.
g. Write application of color control patch.
h. List 2 different shapes of halftone dots.
i. Define dpi and ppi with example
j. Why is continuous tone image converted into halftone while printing.
k. What is Spectral reflection.
l. Define the term opacity.
m. According to Additive theory; R+G=_____, B+R=_____
n. According to subtractive theory; Y+M=_____, M+C=_____

Q2 Attempt any two of the following.   **12**

a. Explain additive color theory. List its 2 applications.
b. With neat diagram; explain human eye structure.
c. Explain Munsell physical color specification system.

Q3 Attempt any two of the following.   **12**

a. Write 4 characteristics of ideal viewer. Also write 2 viewing angles.
b. Describe pantone color measurement system.
c. With neat diagram; explain CIE lab color system.

Q4 Attempt any two of the following.   **12**

a. What is a hue error? Write its formula.
b. What is the need of screen angels? Which problem arises due to its misalignment?
c. With neat diagram; explain the construction & working of colorimeter.

Q5 Attempt any two of the following.   **12**

a. Calculate difference based on CIELab mode for
    I) L_1=90, a_1=20, b_1=31, L_2=96, a_2=20, b_2=31
    II) L_1=50, a_1=15, b_1=8, L_2=50, a_2=15, b_2=48
b. With neat diagram; explain construction & working of spectrophotometer.
c. Describe 3 attributes of colour.

Q6 Attempt any two of the following.   **12**

a. What is trapping? How trapping percentage is calculated? Also write formula for dotgain.
b. Compare light with color upto 6 points.
c. Explain subtractive color theory and list its 2 applications.

Government Institute of Printing Technology, Mumbai
Odd term and theory examination Oct 2023

Course: Press Management   Code: M401

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following.   20
a. Explain the function of management.
b. Write four objectives of production department.
c. Write 4 disadvantages of partnership firm.
d. Write 4 functions of SPC.
e. State laws of demand and supply.
f. State meaning of each 'S' of 5S.
g. Name any two different acts in the industry.

Q2 Attempt any two of the following.   12
a. Differentiate quality control from quality assurance up to 6 points.
b. Name two types of organizations with any two advantages each.
c. What is a trade union? Name two types of union with any two advantages.

Q3 Attempt any two of the following.   12
a. What is ISO? Write any four ISO standards for printing paper and ink.
b. Describe any two types of leadership.
c. Write three duties of production manager or supervisor.

Q4 Attempt any two of the following.   12
a. Classify causes of variation in statistical process parameter.
b. Describe scope of Kaizen.
c. Explain three main provisions in health & welfare factory act.

Q5 Attempt any two of the following.   12
a. Explain the functions of directing and coordination of management.
b. What is MIS? Explain.
c. Describe characteristic of control charts.

Q6 Attempt any two of the following.   12
a. What is process capability? How is it calculated?
b. Write purpose of work instruction ticket and cost sheet. Also draw their format.
c. State formula to calculate upper and lower control limits for X bar and R charts.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Costing and Estimating   Code: M402

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following.   **20**
a. Describe classification of costs.
b. Differentiate upto 4 points. Fixed and variable costs.
c. List components of work instruction ticket along with 2 applications.
d. State any four qualities of estimator.
e. List four factors deciding estimation of binding.
f. State any four characteristics of ISO paper sizes.

Q2 Attempt any two of the following.   **12**
a. Describe of hourly cost rate system.
b. State components of sales report and delivery challan.
c. What are standers press routine? State its 4 merits.

Q3 Attempt any two of the following.   **12**
a. Describe applications of hourly cost rate system.
b. Calculate ink consumption in kg, if 64000 pages are printed using offset process. The print area is $0.2m^2$ and image is half tone process inks are used to print on newsprint.
c. Differentiate up to three points – quotation and tender.

Q4 Attempt any two of the following.   **12**
a. Describe with example the time rate and work rate system of estimating.
b. Calculate total weight in kg. of 4 reams of A2 size paper having GSM of 80.
c. What is GST? State 2 advantages of GST system list GST rate for purchasing of paper, ink & book.

Q5 Attempt any two of the following.   **12**
a. Describe any one method of allocation of expenses.
b. Differentiate up to 6 point- estimating & costing.
c. State any 6 general term and conditions of work order issued for book printing.

Q6 Attempt any two of the following.   **12**
a. What is profitability? State any four factors affecting profitability.
b. Describe wits example, application of material requisition form.
c. Show with diagram, the subdivisions of A0 ISO paper size

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Entrepreneurship development   Code: M403

Duration: 02.00 Hours   Marks:40

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Answer any two questions   **08**
  a. Write names of four startup companies.
  b. Describe two qualities of entrepreneur.
  c. Describe any one scheme to obtain finance from government. State two requirements for eligibility.

Q2 Answer any five questions.   **20**
  a. Explain how mobile apps are useful in i) Grocery business ii) Food & beverage.
  b. Describe two factors related to location of food stall.
  c. Write names of any four banks.
  d. Describe two functions of purchase department.
  e. State two example of micro and small enterprises.
  f. Write four functions of sales department in printing & packaging company.
  g. Write names of any four non-banking financial institutions in India.

Q3 Attempt any three questions.   **12**
  a. An entrepreneur started a business of supplying fresh cow milk, but this business failed. Explain any two causes of its failure.
  b. A plot is purchased in MIDC to establish a paper manufacturing unit. State four contents in loan proposal for this unit.
  c. Define inventory control. List two inventory control techniques.
  d. Write any four required qualities of entrepreneur.
  e. Describe ABC analysis technique of inventory control.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Environmental science and Disaster management   Code: M404

Duration: 02.00 Hours   Marks:40

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any eight of the following.   **16**
a. Define environmental science.
b. Write the sources of water pollution.
c. Define natural resources.
d. Define VOC.
e. Define disaster.
f. Define 'chemical hazards'
g. Write any two physical hazards in printing industry.
h. Define air pollution.
i. Write any two problems associated with explanations of natural resources.
j. Write any two uses of soil.
k. Write any two effects of earthquake.
l. Define tsunami.

Q2 Attempt any three of the following.   **12**
a. Write importance of environmental science.
b. Write any four activities to create awareness about environment in general public.
c. Write any four remedial measures during handling chemical in printing industry.
d. Write any four precautionary measures during drought.
e. Distinguish between natural disaster and manmade disaster.

Q3 Attempt any three of the following.   **12**
a. Differentiate between renewable and nonrenewable energy resources.
b. Explain management of waste water in printing industry.
c. Write any four health issues caused by chemical in the printing industry.
d. Write any four effects of cyclone.
e. Write classification of environmental pollution.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Gravure printing process   Code: M501

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Answer any five questions   20
a. Compare gravure with offset printing technology up to four points.
b. Describe importance of immersion factor and current density in electroplating of cylinder.
c. Describe working principle of electronic engraving.
d. Draw schematic diagram of doctor blade holder assembly and state its two functions.
e. List any four requirements of gravure printing inks.
f. State characteristics and remedies of any two troubles caused by gravure ink.
g. List four physical properties of copper & chromium.

Q2 Answer any two questions.   12
a. Describe any four-application area of gravure printing. Also state its two limitations.
b. With schematic diagram, describe working principle of electroplating unit.
c. Differentiate electronic engraving from laser engraving up to 6 points

Q3 Answer any two questions.   12
a. Differentiate up to three points – forward and reverse angle doctoring.
b. Describe importance of any three end use requirements.
c. State any three-doctor blade related problems along with characteristic, cause and remedy.

Q4 Answer any two questions.   12
a. Draw schematic diagram of sleeve, integral shaft and demountable shaft cylinder.
b. Describe important feature of any two methods of chemical engraving.
c. Describe effect of doctor blade angle, pressure and deflection on inking

Q5 Answer any two questions.   12
a. Describe effect of voltage, distance between electrodes and temperature of deposition of copper in plating.
b. List any three mechanical properties and surface features of doctor blade.
c. Write three advantages and three limitations of electronic shaft drive.

Q6 Answer any two questions.   12
a. Write importance of balancing of gravure cylinder.
b. State any three types of gravure cell geometry. Also describe parameters in formula used to calculate electronic engraving time.
c. Write any three limitations of chemical and electronic engraving.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Flexographic printing process   Code: M502
Duration: 03.00 Hours   Marks:80

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following.   **20**
a. State any four advantages of flexography.
b. Write working principle of flexographic printing and list its 4 application areas.
c. Tabulate screen angles and halftone dot shapes used in flexographic printing.
d. Draw schematic diagram of stock and common impression type flexographic press.
e. Differentiate reverse angle doctor blade system from chambered doctor blade system up to 4 points.
f. State along with one purpose, any four ingredients of flexographic solvent – based ink.
g. List any four properties of plastic substrate used as flexible package.

Q2 Attempt any two of the following.   **12**
a. Differentiate laser engraved rubber roll making from thermal ablation flexographic plate making.
b. Draw a schematic diagram of integral demountable shaft cylinder along with 2 advantages.
c. Describe application areas of scratch, rub, block and weather resistance of flexographic ink.

Q3 Attempt any two of the following.   **12**
a. Compare up to 6 points, flexography from screen printing.
b. Draw cross-section diagram of analog and digital flexographic plate.
c. List any four inline operations and converting operations.

Q4 Attempt any three of the following.   **12**
a. Write stages in liquid and sheet photopolymer flexographic platemaking.
b. Write three limitations each of stack and inline flexographic press.
c. Name any four anilox roll engraving geometry along with angel and list factor governing anilox roll selection.

Q5 Attempt any two of the following.   **12**
a. Describe laser ablation flexographic plate making.
b. Write working principle of magnetic cylinder and state its advantages.
c. State any six mechanical requirements of doctor blade.

Q6 Attempt any two of the following.   **12**
d. State any six advantages of CTP flexographic system.
e. Write working principle, 2 advantages, 2 disadvantages of flexographic sleeve.
f. How is deflection in flexographic doctor blade calculated? Describe.

Government Institute of Printing Technology, Mumbai
Odd term and theory examination Oct 2023

Course: Rigid Packaging   Code: M503
Duration: 03.00 Hours   Marks:80

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any ten of the following.   **20**
a. List any two physical tests done in packaging.
b. Name two the different software is used in packaging industry.
c. Name any 2 the materials used for glass making.
d. Name the two cushioning material and its function.
e. What is a importance of drop test in packaging?
f. List 2 metals are use in packaging.
g. Write the 2 application and properties of duplex board.
h. Write 2 advantages of metals as packaging material.
i. Write 2 applications of glass as packaging material.
j. Define board.
k. List 4 types of board.
l. Write 4 properties of food grade board.
m. What is conditioning of carton related to testing?
n. List 4 rigid packaging materials.

Q2 Attempt any two of the following.   **12**
a. Explain secondary functions of packaging.
b. What is a crush test and vibration test?
c. What is the deferral a flute, name the different flutes with schematic diagram?

Q3 Attempt any two of the following.   **12**
a. Name the different types of tubes. Explain any one with 2 advantages.
b. What is FEFCO explain.
c. What is STE & cartons explain with schematic diagrams.

Q4 Attempt any two of the following.   **12**
a. What is RTE. Draw 5 cm x 4 cm x 5 cm carton layout?
b. What is aerosol container explain with schematic diagram?
c. What is an advantages of life cycle. Explain with diagram.

Q5 Attempt any two of the following.   **12**
a. Explain the manufacturing of any one type of can.
b. Explain any two types of rigid packaging. Material with 3 properties each.
c. Draw layout for 5 cm x 5 cm x 5 cm universal carton & write its 2 applications.

Q6 Attempt any two of the following.   **12**
a. Compare rigid packaging and flexible packaging.
b. Name the printing process used to decorate rigid packaging for the product 1) glass container 2) tin container.
c. Write 3 advantages on using software for carton designing explain any one of them.

Government Institute of Printing Technology, Mumbai
Odd term and theory examination Oct 2023

Course: Plano Sheetfed Printing   Code: M504

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following.   **20**
a. State two characteristics of dry offset process and state its two applications.
b. Write names of 4 paper manufacturing companies.
c. Describe the construction of two sheet detector and state its purpose.
d. Explain importance of ink water balance in offset printing.
e. Name the two types of anti-set off spray with their function.
f. Describe keyless inking system with two advantages.
g. Name the four parts of plate cylinder.

Q2 Attempt any two of the following.   **12**
a. Draw a diagram of single-color sheet fed offset printing machine and write function of any two units.
b. Describe the function of dampening unit on offset press.
c. Describe the following i) Under cut ii) Cylinder gap with proper diagram.

Q3 Attempt any two of the following.   **12**
a. Describe with diagram i) Star target ii) Color control bar
b. Explain the following i) UV dryer ii) IR dryer iii) Hot air dryer.
c. Describe construction and working of blanket cylinder with diagram.

Q4 Attempt any two of the following.   **12**
a. Name the three parts of feeder. Write their function and working.
b. Draw a diagram of conventional dampening unit name its parts and their function.
c. Describe working of inking system with diagram.

Q5 Attempt any two of the following.   **12**
a. Write names of four offset machine manufacturing companies also write names of two QC devices.
b. Differentiate between offset printing and digital printing upto 6 points.
c. Name the components of dampening solution and state their function.

Q6 Attempt any two of the following.   **12**
a. Name the different parts involved in delivery unit and their function.
b. Explain importance of controlling of ink flow and ink water balance.
c. Describe the working of front lay and side lay.

Government Institute of Printing Technology, Mumbai
Odd term and theory examination Oct 2023

Course: Presswork Web | Code: M506

Duration: 03.00 Hours | Marks:80

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Answer any five. 20
a. Describe the meaning of RPL and RPW.
b. Explain working principle of stroboscope.
c. Write names of 4 paper manufacturing companies.
d. How static charges are eliminated on web machine.
e. State 4 factors which change web tension.
f. Draw a diagram of 2 color inline type press.
g. Write names of 4 finishing operations.

Q2 Answer any two. 12
a. Compare sheetfed and webfed offset upto 6 points.
b. Describe construction and working of any two types of reel stand.
c. Describe construction of any one folder on web machine.

Q3 Answer any two. 12
a. Explain the working of zero speed splicer.
b. Explain the working of any one type of dryer.
c. Describe the construction and working compensator roller.

Q4 Attempt any three of the following. 12
a. Describe construction and working of any one of slitter.
b. Draw schematic diagram of Y type web press.
c. Describe with diagram i) Basement ii) Inline iii) Reel stand location.

Q5 Attempt any two of the following. 12
a. State 2 functions and construction of dancer roller.
b. Explain working of any one chilling system.
c. Describe working of any one external registration checking device.

Q6 Answer any two.
a. Compare offset with screen printing up to 6 points.
b. Explain folding operations for newspaper.
c. Describe any 3 problems related to web printing.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Digital Printing   Code: M507

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following. 20
   a. List 4 graphic software used by printing presses, along with 1 advantage.
   b. Describe function of charge generation material and state its 2 examples.
   c. Describe imaging stages in electrophotography-based printer.
   d. List 4 advantages of digital printing.
   e. Write 4 characteristics of SWOP.
   f. Differentiate up to 4 points- software RIP from hardware RIP.
   g. Define resolution. Describe relation between output resolution of digital CTP and printing LPI.

Q2 Attempt any two of the following. 12
   a. Explain 3 application areas of digital printing technology.
   b. Compare dry toner with liquid toner up to 6 points.
   c. Explain principle of continuous inkjet process with diagram.

Q3 Attempt any two of the following. 12
   a. Explain working principle of electrophotography.
   b. Write names of 6 substrates used in large format printing along with 2 applications of each.
   c. Explain soft proofing process. Write its 2 advantages.

Q4 Attempt any two of the following. 12
   a. Write 2 characteristics each of ink deposition, electrostatics & magnetographic printing process.
   b. Explain classification of inkjet printing technology.
   c. Explain function of RIP.

Q5 Attempt any two of the following. 12
   a. Compare between conventional & digital printing technologies.
   b. Describe 2 types of thermal transfer process.
   c. Write any 6 checks done during the preflight operation.

Q6 Attempt any two of the following. 12
   a. Compare between inkjet and electrophotography upto six points.
   b. Describe 2 printing technologies used in large format printing.
   c. Describe requirements of printing technologies used for large format printing.
   d. Write names of 3 companies that manufacturer digital printer. Also write 3 troubles related to use of substrate.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: Electronic color correction   Code: M508

Duration: 03.00 Hours   Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any five of the following.   **20**
  a. Explain additive color theory of color reproduction.
  b. Draw a neat diagram of human eye and list 2 elements responsible for vision.
  c. List 2 features & 2 advantages of PDF.
  d. Define & explain its significance i) DPI ii) LPI.
  e. Write 4 features of PMT used in scanner.
  f. State 4 factors affecting scan quality.
  g. Write 2 application of each i) additive theory ii) subtractive theory.

Q2 Attempt any two of the following.   **12**
  a. List 3 attributes of color & explain any two of them.
  b. List 4 C's of color management & explain any two of them.
  c. With neat diagram, explain densitometer. Write its 2 applications.

Q3 Attempt any two of the following.   **12**
  a. Describe subtractive color theory. List its primary & secondary.
  b. With neat diagram, explain CIELab color model.
  c. With neat labelled diagram, explain construction of spectrophotometer.

Q4 Attempt any two of the following.   **12**
  a. What is preflight? List its 3 advantages.
  b. Define color gamut with diagram. list 2 device dependent & 2 device independent color models.
  c. Write formula & explain dot gain & trapping. Also write its significance.

Q5 Attempt any two of the following.   **12**
  a. Explain neat diagram, explain construction of flat bed scanner. List its 3 advantages also.
  b. Describe test chart. Write about its importance.
  c. Calculate Delta E for the following reading.
     Sample1 (L_1, a_1, b_1); (30; 4; 20)
     Sample 2 (L_2, a_2, b_2); (30; 10; 12)
     justify your answer.

Q6 Attempt any two of the following.   **12**
  a. Differentiate between Vector & Raster upto 6 points.
  b. Define metamerism; explain with suitable example.
  c. State names of any 2 process inks which require color correction. Draw graphs of ideal and actual reflectance.

Government Institute of Printing Technology, Mumbai
Odd term and theory examination Oct 2023

Course: Flexible Packaging   Code: M509
Duration: 03.00 Hours   Marks:80

Instructions to Candidates:
1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 Attempt any ten of the following.   **20**
a. List 2 thermoplastics.
b. Define thermoset.
c. Write 2 applications of flexible packaging.
d. List 2 applications of blister packaging.
e. Write 2 advantages of lamination.
f. Write 2 applications of lamination.
g. Write 2 disadvantages of lamination.
h. Write 2 advantages of shrink wrapping.
i. List 2 packaging materials for packing of any one bakery product.
j. Write requirement of packaging material used for meat packaging.
k. Write full form of MAP & CAP.
l. Write 2 advantages of MAP.
m. Write 2 application of CAP.

Q2 Attempt any two of the following.   **12**
a. Compare between thermoset & thermoplastic up to 6 points.
b. With neat diagram, explain dry lamination. List its 2 applications also.
c. With neat diagram, explain blown film extrusion process.

Q3 Attempt any two of the following.   **12**
a. Write 3 properties each of i) polypropylene ii) polyvinyl chloride
b. With neat diagram, explain blister packaging. Also write its 2 advantages.
c. Explain Aseptic packaging in detail with diagram.

Q4 Attempt any two of the following.   **12**
a. Define flexible packaging. Define polymer, polymerization. Explain with suitable example.
b. Explain bottle manufacturing process with neat diagram.
c. With neat diagram, explain pouch making machine.

Q5 Attempt any two of the following.   **12**
a. Explain meat packaging with neat diagram.
b. Describe intelligent labels with example.
c. Explain stretch wrapping with neat diagram. Write its 2 advantages and 2 applications also.

Q6 Attempt any two of the following.   **12**
a. Write 6 requirements of packaging related to food packaging.
b. What is sustainable packaging? Also explain environmental aspects related to it.
c. What is intelligent packaging. Explain with suitable.

Government Institute of Printing Technology, Mumbai

Odd term and theory examination Oct 2023

Course: English   Code: M101

Duration: 03.00   Marks:80

Instructions to Candidates:

1. Attempt all questions and illustrate your answer with neat sketches wherever necessary.
2. Figures to the right indicate full marks.
3. Assume suitable data if necessary

Q1 A) Do as directed (any ten)   **10**

a. They couldn't trust her at this point. (Add question tag)

b. The master told his servant, "Do as you are told". (Change into indirect speech)

c. We saw him talking to the station master. (Change the voice)

d. It is really a most remarkable story. (Change the degree)

e. I am inclined to help you. (Make it negative)

f. Completing their work for the day, the carpenters went home. (Make it compound sentences)

g. He finished his exercise and put away his book. (Make it simple)

h. I wish that I were rich again (make it exclamatory)

i. My sister makes breakfast for the family. (Make it interrogative)

j. He can make people laugh. He can make people cry. (Use not only but also)

k. The body cannot perform any function, if there are no specific nutrients (Rewrite using 'Unless').

l. They are too dishonest not to take a bribe. ('Remove too')

B) Fill in the blanks with suitable articles (A, An, The)   **04**

a. I have _____ book and pen.

b. Bring _____ files have.

c. _____eager man gets what he wishes.

d. _____ Sharmas are a jolly family.

e. He is _____ M.A. of Oxford.

Q2 A) Separate the clauses and name them (any four)   **12**

a. People who pay their debts are trusted.

b. We cannot go while it is snowing.

c. After I reached home, it started raining.

d. This is the boy who got suspended last week.

e. Olena likes stories that have fairies in them.

f. Riya was sure that Tia would come today.

B) Add Prefix and suffix (Any Six)

a. _____oxide   g. Star _____
b. _____ generate   h. Book_____
c. _____mater   i. Fear_____
d. _____act.   j. For _____
e. _____gain.   k. Simpli_____
f. _____skilled.   l. Other_____

C) Fill in the blanks with the appropriate form of verbs given in the bracket (any four).   **04**

a. I _____ fifty next month (be).

b. I saw that I _____ the first prize. (win)

c. They have just _____ from Landon (arrive)

d. She _____ him if he asked her. (marry)

e. He said he _____ next day (come)

Q3 A) Use the following phrases in your own sentences. (any six)   06

    a. In case of-   f. Once again-
    b. For want of-   g. On behalf of-
    c. By the side of-   h. On purpose –
    d. Because of-   i. At the same time-
    e. In time-   j. Hold good-

B) insert the give adverb. (Any four)   04

a. This child cries in the morning (always)
b. I have seen an octopus (never)
c. She comes late (daily)
d. We shall begin to study (now)
e. I heard the sound (clearly)

C) Write short paragraph on – "internet"   04

Q4 A) Punctuate the following sentence (any four).   04

a. Bulbul said can I borrow your dictionary.
b. She cried alas I am undone.
c. He said good bye dear friend. Let us meet again.
d. Whose house are you looking for I asked him.
e. I said I like my new house.

B) Write a letter to book seller ordering books.

<p align="center">Or</p>

Write a letter to younger brother at home describing a visit to the zoo.

Q5 A) Read the passage carefully and answer the question given below.   10

Our forests are important sources of natural wealth covering one fifth of the country's land area. They supply the timber for the railways, house building and furniture making. They also supply the fuel for cocking and the bamboo for paper making. Medical herbs also come from the forest.

In the olden days our wiseman and philosophers had their Ashrams in the forest. These Ashrams were center of knowledge & learning, unfortunately forests were ruthlessely cut down in the past few years. While the forests are disappearing the demand for timber is growing. We must therefore protect and develop our forests. 'Vana Mohotsav' is an important step in this direction. It is observed for a week in July every year.

Questions-

a. For what purpose do we need timber?
b. What do forests supply for paper making?
c. What did our wisemen and philosophers do in the forest?
d. What was the use of Ashrams?
e. What was unfortunate about the forests in the past few years?

B) attempt a summary of the above passage and suggest a suitable title.   04

Q6 A) Write a short conversation between two childhood friends who have grown older now.   06

B) Combine sentence using Noun, Adverb and Adjective clauses (any six)   06

a. 1986 was the year Halley's co met approved them.
b. I know a woman. Her brother is famous.
c. The policeman delayed the drivers. The works were closed.
d. She will win the first Prize. It is certain.
e. She is the girl. Everyone always talks about her.
f. He was innocent. He could not prove that.
g. A boy won the nationals peeling contest. He lives in North Carolina.
h. He will fight to the finish. He says this
i. Dad donates his suits to charity. He has worn them a year.
j. We watched the robins. They raised their young in our apple tree.

<p align="center">---</p>