

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

Course: Communication Skill (English)

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 the following questions. (Any 5)

20

- a. Name any two situation in which two way communications occurs.
- b. What are the principles of effective communication?
- c. What are the importance of graphs, charts and tables in communication?
- d. What is a psychological barrier? Explain with an example.
- e. What are the components of communication?
- f. What is the technique of paragraph writing?
- g. Explain kinesics with one example.

Q2 Write an essay in about 250 words. (Any 1)

12

- a. Where there is a will, there is a way.
- b. Social Media.
- c. A road Accident.

Q3 Answer the following questions. (Any 2)

12

- a. As the class representative submit a detailed report to your HOD regarding the absence of certain students in theory and practical classes. Suggest preventative measures.
- b. Draft a notice inviting the members to attend a meeting of the board of directors of the company.
- c. Your industry has not been able to meet the production target for the month because of excessive casual leave of the workers. As a manager draft a memorandum warning the workers that if this trend continues their bonus will be reduced.

Q4 Answer the following questions.

06

- a. Write an application for the post of Assistant Professor in English in St. Joseph and Mary college, Mumbai with a bio data.

OR

- b. As a student, you find that sports is not given its due place and importance and thus you write suitable letter to the District sports office of the Mumbai Division requesting him to provide adequate funds and facilities for sports.
- C. What is summary writing? What are the techniques of summary writing?

06

Q5 Read the following passage and answer the given questions.

08

Self knowledge goes hand in hand with inner happiness and outer achievement. To perform at your best you need to know who you are and why you think and feel the way you do. You need to understand the forces and influences that have shaped your character from earliest childhood. You need to know why you react and respond the way you do to the people and situations around you. It is only when you understand and accept yourself that you can move forward in the other areas of your life.

- a. Questions-
 - i). State the importance of understanding the forces and influences that have shaped your character, as mentioned in the passage.
 - ii). According to the passage mention the stage when you move forward in other areas of your life
 - iii). According to the passage, relate self knowledge to inner happiness and outer achievement
 - iv). Explain the importance of self - knowledge to contribute to performing at your best as stated in the passage..
- b. Write a summary of the above extract and suggest a suitable title

04

Q6 Answer the following questions.

08

- a. You are invited to the inauguration of a Health Club in your locality. Write the speech you would deliver

OR

- b Write a speech on “ Life is a dream”

C. Write short note on any one

04

i. Television

ii. Camera

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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 the following questions. (Any 5)

20

- a. State any four points of Arrhenius theory of acid and base.
- b. Write full form of LASER. Write the characteristics of LASER.
- c. Write the purposes of electroplating on metal.
- d. Define Base, write any two examples of it.
- e. State and explain Stokes Law.
- f. Define i) Refraction ii) Diffraction.
- g. Define cation and anion with one example each.

Q2 Answer the following questions. (Any 2)

12

- a. Define Reflection. Write the laws of reflection.
- b. Define unit, write the requirements of standard unit.
- c. Differentiate between centrifugal force and centripetal force.

Q3 Answer the following questions. (Any 2)

12

- a. Classify the following quantities as fundamental and derived quantities i) Length ii) Force
- b. iii) Temperature iv) Mass v) Volume vi) Acceleration.
- c. Define angle of contact and explain the rise of liquid in capillary.
- d. State and explain Newton's second law of motion with derivation $F = ma$.

Q4 Answer the following questions. (Any 2)

12

- a. Define accuracy and precision and differentiate between them with suitable example.
- b. State Newton's Law of viscosity and derive its expression.
- c. Define i) Velocity ii) Motion iii) Speed.

Q5 Answer the following questions. (Any 2)

12

- a. Differentiate between atom and ion.
- b. Define Energy. Write its SI unit. State Laws of conservation of energy.
- c. Differentiate between strong acid and weak acid

Q6 Answer the following questions. (Any 3)

12

- a. Define and explain polarization of light with suitable diagram.
 - b. Write the properties of Bases.
 - c. Define Lewis acid and Lewis Base. Write one example of each.
 - d. Define Surface tension. Write its SI unit.
 - e. A current of 3 amperes passing through the silver nitrate solution for 20 minutes deposits 4.0 g of silver what is electrochemical equivalent of silver?
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Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 5)

20

- a. Draw schematic diagram of hydraulic power unit.
- b. Write four characteristics of hydraulic power system.
- c. State Boyle's law and Charle's law from pneumatic power point of view.
- d. Differentiate pneumatic power system from hydraulic power.
- e. Define and state measurement units for resistivity, conductivity.
- f. Differentiate electrical conductor from insulator.
- g. Draw general electrical circuit and show directions of flow of electrons and current.

Q2 Answer the following questions. (Any 2)

12

- a. Describe classification of mechanical drives.
- b. State laws of static and kinetic friction.
- c. Define mechanical advantage? Calculate the mechanical advantages of a hydraulic lift if 5000N force is generated using 3000N effort.

Q3 Answer the following questions. (Any 2)

12

- a. What is power transmission? Compare individual and group drive.
- b. Describe classification of lubricants.
- c. Write principle and two advantages each of centralized and decentralized compressed air system.

Q4 Answer the following questions. (Any 2)

12

- a. Draw schematic diagrams of any two cam & follower mechanisms, also state one application of each.
- b. Define coefficient of static friction. Write its importance in printing and packaging. Calculate the static friction if a force of 200N is applied on a snack box of 5kg. The coefficient of static friction is 0.3.
- c. State and describe Ohm's Law.

Q5 Answer the following questions. (Any 2)

12

- a. Differentiate helical gear from spur gear.
- b. State relationship between (ascending order) coefficient of static kinetic & rolling frictions. Write any four limitations of hydraulic system.
- c. State Kirchoff's current and voltage laws with schematic diagram.

Q6 Answer the following questions. (Any 2)

12

- a. Draw schematic diagram of spur gear to show pitch circle, pitch, addendum, dedendum, also state formula for velocity ratio in power transmission using gears.
 - b. With schematic diagram state working principle of double acting and rotary compressor.
 - c. Compare star connection with delta connection in electrical circuit.
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

Course: Printer's Mathematics

Code: M106

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. Use of non-programmable calculator is permitted.
3. Assume suitable data if necessary.

Q1. Answer the following questions. (Any 5)

20

- a. Define I) direction proportion II) indirect proportion.
- b. Find the ratio of i) 25:100 ii) 4:16 iii) 10:40 iv) 9:36.
- c. Find out the simple interest per year that will make Rs.5000 become Rs. 6050 in 3 year.
- d. Find the volume of 15 cubes of side 10cm each.
- e. Convert the percentage in to fraction i) 28% ii) 55% iii) 85% iv) 144%
- f. Define graph. State the types of graphs.
- g. Find the mean of following data
3,5,7,11,19,17,7,15,7,14,11,3,7,16.

Q2 Answer the following questions. (Any 3)

12

- a. A truck travels a distance of 810 km in 9 hrs. How many km will it travel in 12 hrs.
- b. Find the compound interest on Rs 8000/- at 15% per annum for 2 years compounded.
- c. Find the total surface area of a cone having diameter 10cm and height 12cm.
- d. If a watch is purchased for Rs 4000/- and sold in Rs 3600/-. find the loss in percentage.
- e. State the steps of plotting a pie chart.

Q3 Answer the following questions. (Any 3)

12

- a. Find the ratio of 75 cm and 2.5 meters.
- b. Amar takes a loan of Rs.10,000/- from a bank for 1 year . the rate of interest per annum is 10%. find the interest amount he has to pay at the end of year.
- c. Find surface area of a cylinder of radius 21 cm and length 63 cm.
- d. A printer is bought at Rs.25,000. It is sold at 15% profit. Find the selling price of the printer.

Q4 Answer the following questions. (Any 3)

12

- a. A train is moving at a speed of 81 kmph. Find out the distance covered by it is 30 min.
- b. Find the compound interest for Rs.1000 for 100 years at 10% per year.
- c. Differentiate between cone and cylinder (Four point).
- d. Akshay bought TV Rs.40,000/- and paid Rs.500 for transportation. Then he sold it for Rs. 45,000/- . find its profit in percentage.
- e. Find the mode and median of following data : 63,69,67,62,63,65,63,62,69,64.

Q5 Answer the following questions. (Any 3)

12

- a. Find the simple interest on 12,400 Rs for two years at the rate of 12% per year.
- b. Find the surface area of a cube having side 10 cm.
- c. What is depreciation? State different types of depreciation.
- d. Draw a line graph of monthly temperature record

Month	Jan	Feb	Mar	Apri	May	June	Jully	Aug
Temp in ⁰ c	23	25	30	32	36	32	28	27

- e. Calculate range, mean and mode of the following data.
4,3,2,6,7,6,8,7,9,10,11,5,6,7

Q6 Answer the following questions. (Any 2)

12

- a. Divide rs 1500 among P,Q,R,S in the Ratio of 22:11:33:34
- b. Find the volume of two cube of 11cm and 13cm respectively.
- c. State and steps plotting bar graph.
- d. The daily earning of 12 workers in a workshop are
15,155,175,180,172,156,181,176,175,155,180. Find the mean of earning.

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 10)

20

- a. Name the printer's colours.
- b. Define 'Original'.
- c. Write two limitations of Floppy Disc.
- d. Describe two qualities of lens.
- e. Define halftone image.
- f. Define 'density'.
- g. What is screen angle?
- h. Write two types of dot shapes.
- i. Write two applications of digital camera.
- j. Write two disadvantages of recording media.
- k. Write two applications of additive color theory.
- l. Write classification of originals.
- m. Name the two properties of color.
- n. What is reflection original?

Q2 Answer the following questions. (Any 3)

12

- a. Compare between light and color upto six points.
- b. Write any three characteristics each of I) Line tone originals II) Continuous tone original.
- c. Explain any one recording media used in graphic reproduction.
- d. Write working principle and construction of digital camera.

Q3 Answer the following questions. (Any 3)

12

- a. Name the types of densitometer. Write two limitations.
- b. Write two advantages and two limitations of hybrid screen.
- c. Describe photo sensors used in digital camera and their functions.
- d. Write four advantages of recording media.define magnification. Write magnification formulae.

Q4 Answer the following questions. (Any 3)

12

- a. Explain subtractive color theory in details with application.
- b. Write short note on factors governing selection of originals.
- c. Write short note on FM screening.
- d. What is screen ruling? Write working principle of screening.

Q5 Answer the following questions. (Any 3)

12

- a. Compare AM and FM screening.
- b. Explain need and advantages of densitometry.
- c. Write two applications of each I) Ultraviolet Light II) Infrared Light.
- d. Compare digital photography with conventional photography up to four points.
- e. Explain any 2 lens aberrations.

Q6 Answer the following questions. (Any 3)

12

- a. i) Explain depth of focus ii) Write full form of dpi,ppi and lpi
- b. Write properties of original.
- c. What is densitometer? Explain working principle and two applications.
- d. Write six characteristics of AM screening.

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 5)

20

- a. Explain how trim marks and folding marks help binder.
- b. Write names and function of any two moving parts of cutting machine.
- c. Write 2 applications of adhesives in binding department .
- d. Write name and function of 2 parts of TKT.
- e. Describe any 2 paper properties related to binding.
- f. Write in sequence the operations performed on gathering machine.
- g. State 4 applications of finishing operations.

Q2 Answer the following questions. (Any 2)

12

- a. Write names and purpose of 6 materials used in binding.
- b. Write A0,B0,C0 paper sizes & 2 applications.
- c. (i) How many sheets of A4 size can we get from 5 reams of A2 size ream.
(ii) 2.5 gross boards = _____ number of boards.

Q3 Answer the following questions. (Any 2)

12

- a. Explain 2 properties of adhesive. Write name of 2 companies manufacturing adhesive.
- b. Describe working of bucket folding ,with diagram.
- c. Write name and purpose of 3 parts on adhesive binding machine.

Q4 Answer the following questions. (Any 2)

12

- a. Describe any 3 troubles related to the machine encountered in book binding /finishing.
- b. Describe constructions of knife folding with diagram.
- c. Describe punching (Diecutting) operation & state 2 applications.

Q5 Answer the following questions. (Any 2)

12

- a. Explain how sequence of gathering of folded forms is checked.
- b. Write names of 3 companies manufacturing machines related to binding and finishing. Also write name of their product.
- c. Write sequences of cutting 1 ream of 23" X36" into 4 equal parts.

Q6 Answer the following questions. (Any 2)

12

- a. Draw schematic diagrams showing 3 binder's marks and state their purpose.
 - b. Explain construction of book sewing machine.
 - c. Explain 3 finishing operations that you will performs on a cake carton to make it attractive.
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2024

Course: Printing Process - 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. Answer the following questions. (Any 4)

16

- a. Name the four printing machine manufacturing companies.
- b. Name the raw materials used in binding.
- c. State two advantages of print media.
- d. Draw a diagram of single color offset press and name its parts.
- e. Write name of two ink components and their purpose.
- f. Write names of four light sources.

Q2 Answer the following questions. (Any 3)

12

- a. Differentiate between webfed and sheetfed machine (upto 4 points).
- b. Name the two materials and chemicals used in plate making.
- c. Define printing technology. Write its three applications.
- d. Write name of two absorbent and two non absorbent substrates.

Q3 Answer the following questions. (Any 3)

12

- a. Describe two functions each of prepress and post press.
 - b. Write types of originals and explain any one.
 - c. Explain in details negative P.S. Plate manufacturing.
 - d. Draw diagram of common impression cylinder type printing machine and name its parts.
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 5)

20

- a. List four advantages of recycled paper.
- b. Explain the grammage and whiteness of paper.
- c. List any two general properties of the food grade paper and tissue paper.
- d. Define speciality paper, write three examples of it.
- e. Describe the role of resins in ink.
- f. Explain the stages in paste ink manufacturing.
- g. List any four ink drying methods.

Q2 Answer the following questions. (Any 2)

12

- a. Explain the working of paper board manufacturing machine.
- b. List the steps to measure the tensile strength of paper.
- c. Compare organic and inorganic pigment up to six points.

Q3 Answer the following questions. (Any 2)

12

- a. Compare mechanical and chemical pulp making process.
- b. Elaborate on three mechanical properties of the paper and its significance in printing .
- c. Classify the ingredients used for ink.

Q4 Answer the following questions. (Any 2)

12

- a. Elaborate on surface sizing machine, calendering and machine glazing.
- b. Justify “ dimensional stability of the paper” is the most important consideration for halftone process color printing.
- c. Explain viscosity, length and tack of ink.

Q5 Answer the following questions. (Any 2)

12

- a. Explain the main sections of the paper manufacturing machine.
- b. Elaborate on liquid ink manufacturing.
- c. Explain any 3 specially inks.

Q6 Answer the following questions. (Any 2)

12

- a. Determine the six factors that influence the cost of paper.
 - b. Elaborate on any three required properties of offset and gravure ink.
 - c. Compare evaporation drying and absorption drying up to six points.
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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 the following questions. (Any 4)

16

- a. State working of principle of lithographic printing.
- b. Write definition of imposition and its applications.
- c. Write four advantages of waterless plate.
- d. Explain necessity of graining plate surface.
- e. What is role of temperature, humidity, PH and transmission density in plate making department.
- f. Write function of Gum Arabic and Developing solution.

Q2 Answer the following questions. (Any 3)

12

- a. State workflow of CTP process.
- b. Describe any two quality tests performed on plate coating.
- c. Name the base materials used for plate making (any four).
- d. Describe working of auto plate processor.

Q3 Answer the following questions. (Any 3)

12

- a. State any two optical and two physical requirements of photographic film.
 - b. State four characteristics of PS positive plate.
 - c. State any two chemical and two physical properties of aluminum as base for lithographic image.
 - d. State two purposes of counter etching surface treatment of litho plate.
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

Course: Colour 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

Q1. Answer the following questions. (Any 5)

20

- a. Elaborate line and continuous spectrum of electromagnetic radiation.
- b. Describe two factors that affect the appearance of color.
- c. Describe Munsell color system.
- d. Describe CIELab color space.
- e. State 2 advantages & 2 applications of 3D color space.
- f. Describe two characteristics of full color graphic original.
- g. State 2 characteristics each of any two dot shapes.

Q2 Answer the following questions. (Any 2)

12

- a. Explain with example
 - I) Device dependent color.
 - II) Device independent color .
- b. Calculate hue error
 - I) $D_c=1.05$, $D_m=1.15$, $D_y=0.95$, $D_k=1.45$
 - II) $D_c= 1.23$, $D_m= 1.04$, $D_y=0.67$, $D_k=1.19$
- c. Explain additivity failure & proportionality failure.

Q3 Answer the following questions. (Any 2)

12

- a. Compare color & light up to 6 points.
- b. Explain I) Adaption II) Metamerism
- c. State 4 characteristics and 2 applications of Pantone color matching system.

Q4 Answer the following questions. (Any 2)

12

- a. Write 6 characteristics of subtractive color theory.
- b. Describe spectral reflectance curves of red, green and blue light.
- c. State 4 technical specifications of densitometer. Also state its 2 applications.

Q5 Answer the following questions. (Any 2)

12

- a. Explain with diagram reflection, transmission and absorption of light.
- b. Explain - I) Ink trapping II) Dot gain. Also write their formula.
- c. Describe moire effect. State its causes & remedies.

Q6 Answer the following questions. (Any 2)

12

- a. Find color difference (ΔE)
 - I) $L_1 = 79$, $L_2 = 75$, $a_1 = 34$, $a_2 = 37$, $b_1 = 29$, $b_2 = 29$
 - II) $L_1 = 27$, $L_2 = 29$, $a_1 = 75$, $a_2 = 79$, $b_1 = -13$, $b_2 = -15$
 - b. Draw ideal and actual spectral reflectance curves of cyan, magenta & yellow process inks.
 - c. With neat diagram, explain construction and working of colorimeter.
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 5)

20

- a. Describe any one function of management.
- b. List any four functions of sales department.
- c. State four drawbacks of Partnership Firm.
- d. Differentiate quality control and quality assurance.
- e. State price elasticity of demand for different classes of goods and services.
- f. Write objectives of Kaizen approach.
- g. Define copyright and state its two advantages.

Q2 Answer the following questions. (Any 2)

12

- a. Describe any two costs of quality.
- b. Explain principles of 5S.
- c. State 6 safety provisions of companies act.

Q3 Answer the following questions. (Any 2)

12

- a. State recommendations of ISO 12647 standard.
- b. Describe scope of leadership in business.
- c. List 6 functions of purchase department.

Q4 Answer the following questions. (Any 2)

12

- a. Classify control charts used in SPC.
- b. Describe scope of six sigma approach.
- c. State health related provisions of companies act.

Q5 Answer the following questions. (Any 2)

12

- a. Compare management with administration.
- b. State merits of using MIS. Give its 4 examples.
- c. Describe stages in production planning.

Q6 Answer the following questions. (Any 2)

12

- a. Describe method of calculating process capability.
 - b. State creations for which copyright are registered.
 - c. Elaborate laws of demand & supply with suitable examples.
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Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 5)

20

- a. Differentiate fixed and variable costs up to 2 points.
- b. Describe any two types of budget centers.
- c. State 2 purposes each of tax invoice and proforma invoice.
- d. List 4 examples ISO paper sizes.
- e. State 4 advantages of standard press routine.
- f. List 4 variables used in SPANKS formula.
- g. What is GST? State tax for any two printed products.

Q2 Answer the following questions. (Any 2)

12

- a. Describe in brief marginal and standard costing.
- b. Explain Work Instruction Ticket
- c. Estimate total ink consumption in Kg for printing 10000 copies using 4 color process inks on 4 page newspaper. The print area is (40X50) cm, ink coverage is 1.5 gsm.

Q3 Answer the following questions. (Any 2)

12

- a. Describe any three factors related to the forecasting life of 4 color sheetfed offset printing machine.
- b. State 3 qualities and 3 tools of an estimator.
- c. State general clause included in purchase order regarding late and / or short delivery of goods.

Q4 Answer the following questions. (Any 2)

12

- a. What is allocation of expenses? Describe one method used to allocate expenses.
- b. What is ISO paper size? State A0, B0, C0, B2, A3 ISO paper sizes in mm.
- c. Calculate weight of 30 reams of A4 size 75 gsm paper and its cost if rate is Rs.80/Kg.

Q5 Answer the following questions. (Any 2)

12

- a. Describe any three factors affecting profitability.
- b. 5000 copies of A4 size book is to be printed.how many reams of A0 size paper will be used. Number of pages in each book is 160.
- c. Describe general conditions of tender document. (any three)

Q6 Answer the following questions. (Any 2)

12

- a. Write names of 2 manufacturing companies each for paper, ink, digital printer.
 - b. Describe the summary of expenses statement format.
 - c. State two 2 factors determining rates for DTP, plate making and binding works.
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Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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 the following questions. (Any 4)

16

- a. Write names of four app (mobile application) based businesses.
- b. Write names of two famous businessmen and the company they established.
- c. Describe two factors to be considered for the location of medical shop.
- d. List four factors to increase the sale of toothpaste.
- e. State four contents related to bakery business to be included in the loan proposal.
- f. State names of four mobile apps used for payment.

Q2 Answer the following questions. (Any 3)

12

- a. State meaning and one example each of micro and small business.
- b. List four functions of purchase department.
- c. Write names of four famous start up business.
- d. Explain how ABC analysis is useful in printing business.
- e. State four reasons of failure of printing business.

Q3 Answer the following questions. (Any 3)

12

- a. State four functions of sales department of ink company.
 - b. State four points to be involved about the printing machine for which loan is required from bank.
 - c. Describe four qualities of entrepreneur in printing.
 - d. Describe two points as to how government supports the entrepreneurs.
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Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Define terms. (Any 05)

20

- a. With appropriate diagrams compare the image carriers used in gravure with other printing process.
- b. Describe two factors considered in selection of impression rollers for gravure process.
- c. State 4 materials used in the manufacturing of doctor blade.
- d. State 4 properties of gravure inks.
- e. List four components used in gravure inks.
- f. Elaborate on any two troubles and trouble shooting done during the gravure printing process.
- g. Explain the troubles that are encountered by defective inks during gravure printing process. (Mention 2 troubles).

Q2 Answer the following questions. (Any 2)

12

- a. With a diagram explain integral shafts used in gravure cylinder.
- b. State 3 troubles caused by doctor blade during the printing process. How will you troubleshoot it ?
- c. Differentiate between chemical cylinder engraving and electronic cylinder engraving.(6 points).

Q3 Answer the following questions. (Any 2)

12

- a. With a diagram, explain ballard cell gravure cylinder.
- b. Elaborate on image processing for gravure process.
- c. What are the factors involved in selecting the cylinder engraving method? Describe any one method of engraving.

Q4 Answer the following questions. (Any 2)

12

- a. State 2 characteristics of each layer used in gravure cylinder.
- b. Explain the step by step process of chemical engraving for gravure cylinder.
- c. How is the ink used in gravure printing different than the ink used in offset printing?

Q5 Answer the following questions. (Any 2)

12

- a. Explain in details the cylinder balancing method used for gravure cylinder.
- b. How does screen angle, cell size and cell shape influence the transfer of ink on substrate during gravure printing process? Support your answer with appropriate examples.
- c. Draw a neat diagram of doctor blade assembly and explain various parts.

Q6 Answer the following questions. (Any 2)

12

- a. Explain in details the electroplating process used in cylinder making.
 - b. Explain the construction of laser engraved gravure cylinder.
 - c. Explain the working principle of electronic line shaft. Mention its application area.
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Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 5)** **20**
- a. State 2 advantages & 2 limitations of flexography.
 - b. Write names of 4 flexo machine manufacturing companies.
 - c. Write 4 technical specifications of flexographic plate.
 - d. State 2 characteristics of flexo graphic impression cylinder.
 - e. Write 4 technical specifications of anilox roller.
 - f. Describe any 2 QC test performed on flexo printed products.
 - g. Describe the working of corona treater.
- Q2 Answer the following questions. (Any 2)** **12**
- a. Explain the necessity of back exposure and post exposure.
 - b. State 4 characteristics & 2 applications of satellite flexo press.
 - c. Write names of 6 substrates used in flexography.
- Q3 Answer the following questions. (Any 2)** **12**
- a. Compare flexography with digital printing up to 6 points.
 - b. Explain how shrinkage allowance for flexoplate is determined.
 - c. Draw schematic diagram of flexography. State its 2 advantages.
- Q4 Answer the following questions. (Any 2)** **12**
- a. Explain developing operation of flexo plate.
 - b. Draw schematic diagram of 2 color inline type flexo press and state its 2 applications.
 - c. Explain construction and working of chambered doctor blade inking system.
- Q5 Answer the following questions. (Any 2)** **12**
- a. Explain the construction and working of CTP flexoplate setter.
 - b. Explain the construction & working of tympan bar flexo press.
 - c. State two characteristics each of any three types of engraving on anilox roller.
- Q6 Answer the following questions. (Any 2)** **12**
- a. Describe (i) Double sided adhesive tape (ii) Shore hardness of flexo plate (iii) Flexoplate thickness.
 - b. Compare flexography with screen printing up to 6 points.
 - c. Explain any three troubles and their solutions related to flexographic printing process.
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 5)

20

- a. Write any four drawbacks of offset inking system.
- b. Describe any two application areas of sheetfed offset printing.
- c. State working principle of two sheet detector and no sheet detector.
- d. Write characteristics cause & remedy of any two printing problems induced by dampening system.
- e. Draw schematic diagram of feed board.
- f. State types of grippers & describe working of any one.
- g. List any four components in plate cylinder design and write function.

Q2 Answer the following questions. (Any 2)

12

- a. Describe procedure of setting inking units.
- b. State required qualities of blanket covering.
- c. Explain working of stream feeder.

Q3 Answer the following questions. (Any 2)

12

- a. Write working principle of star target.
- b. Differentiate IR and UV dryer.
- c. Describe working of pile height governor and anti set-off spray.

Q4 Answer the following questions. (Any 2)

12

- a. State causes & remedy of runnability problems.
- b. Describe working of any one continuous flow dampening.
- c. Describe procedure of plate & blanket mounting.

Q5 Answer the following questions. (Any 2)

12

- a. Name any 3 paper manufacturing & offset machine manufacturing firms.
- b. Write six advantages of offset over digital printing.
- c. State functions of ingredients of dampening solutions.

Q6 Answer the following questions. (Any 2)

12

- a. Describe procedure of delivery unit setting.
 - b. Explain 3 point sheet registration system.
 - c. State any six variables causing dot gain in sheetfed offset printing.
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

Course: Press Work 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 the following questions. (Any 5)

20

- a. Write two advantages and two limitations of web offset.
- b. Explain working of chill roller on webfed presses.
- c. Write names of 2 folders on web fed process.
- d. Write importance of color register system.
- e. Write names of four web fed machine manufacturing companies.
- f. Explain difference between slitting and trimming.
- g. Explain telescopic rolls with its causes.

Q2 Answer the following questions. (Any 2)

12

- a. Compare sheetfed offset press with webfed offset press up to 6 points.
- b. Describe the working principle of any one type of reel stand with neat diagram.
- c. Explain former folder with diagram.

Q3 Answer the following questions. (Any 2)

12

- a. Describe zero speed splicer with diagram
- b. Describe construction and working of jacketed chill roller with neat diagram.
- c. Describe construction and working of register control device (any one).

Q4 Answer the following questions. (Any 2)

12

- a. List any three configurations of web press and explain any one.
- b. Write working principle of dancer roller with diagram.
- c. Write one cause and remedy each for a) web break b) fan-out c) wrinkles.

Q5 Answer the following questions. (Any 3)

12

- a. List the web locking system. Explain any one.
- b. Why the dryers are required on web presses? Explain any one dryer.
- c. Explain Box tilt with neat diagram.

Q6 Answer the following questions. (Any 3)

12

- a. List three reel stands and three locations of reel stands.
 - b. Describe importance of conveyor mechanism. Explain its working.
 - c. Describe the following I) slitting II) trimming
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 5)

20

- a. List 4 limitations of digital printing technology.
- b. State 4 features of organic photo conductors.
- c. List 4 examples of selenium material.
- d. Write 4 application areas of wide format digital printing.
- e. State 4 advantages of digital proofing system.
- f. List 4 functions of Raster Image Processor.
- g. State 4 factors affecting output resolution of any one digital printing device.

Q2 Answer the following questions. (Any 2)

12

- a. Compare conventional with digital printing technologies up to 06 points.
- b. Explain working principle of selenium material.
- c. Describes working principle of ink-jet printing.

Q3 Answer the following questions. (Any 2)

12

- a. Compare charge generation layer & charge transport layer up to 06 points.
- b. Write technical specification of general wide format printer.
- c. Explain any one digital proofing technology.

Q4 Answer the following questions. (Any 2)

12

- a. Compare liquid & dry toners upto 6 points.
- b. Explain working principle of thermal transfer digital printing system.
- c. Describe any 3 functions of RIP

Q5 Answer the following questions. (Any 2)

12

- a. Explain application of digital printing technology in 1) - computer to film 2) print on demand 3) variable data printing.
- b. State 6 requirements of inks used for ink jet printing.
- c. Compare hard proofing & soft proofing up to 6 points.

Q6 Answer the following questions. (Any 2)

12

- a. Describe application of digital printing in 3D printing state three characteristics of SWOP.
 - b. Explain general composition of ink used for ink jet printing.
 - c. Explain any 3 required properties of substrate used for large format printing.
-

Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 5)

20

- a. Write the function of Rods & Cones in human vision.
- b. Elaborate I) duo tone II) spot color.
- c. Write meaning & purpose of White & Black point compensation.
- d. Write full form of I) RIP II) FM III) AM IV) CCD.
- e. With neat diagram; explain work flow of Flatbed scanner.
- f. Define I) PPI II) LPI III) DPI IV) resolution.
- g. Explain PDL (Post Description Language).

Q2 Answer the following questions. (Any 2)

12

- a. What are errors of trichromatism. Describe related to magenta ink.
- b. Elaborate 4 Cs of color management.
- c. With neat diagram; explain working of densitometer.

Q3 Answer the following questions. (Any 2)

12

- a. With neat diagram; explain Subtractive color theory.
- b. What do you mean by Color Gamut, draw for RGB & CMYK.
- c. Explain CIP4 technology.

Q4 Answer the following questions. (Any 2)

12

- a. With neat diagram; explain Additive color theory.
- b. Write 3 function of test chart. Explain any 3 elements used in it.
- c. Find color deviation ΔE for CIELab values.
a) $A_1 (50, -3, 5)$ $A_2 (52, -3, 6)$ b) $B_1 (16, 4, 16)$ $B_2 (18, 4, 16)$

Q5 Answer the following questions. (Any 2)

12

- a. With neat diagram. Explain construction & working of PMT.
- b. what do you mean by Device dependent colors. Explain with example.
- c. What do you mean by 'Dot gain' write its formula. also elaborate trapping.

Q6 Answer the following questions. (Any 2)

12

- a. What do you mean by preflight? Write its stages.
 - b. Elaborate
 - i) Rendering intent
 - ii) relative & absolute colorimetric intent
 - c. With neat diagram; explain construction & working of spectrophotometer.
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Government Institute of Printing Technology, Mumbai

Even term end theory examination April / May 2025

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. Answer the following questions. (Any 10) 20

- a. Define condensation polymerization, with 2 examples.
- b. Write 2 properties of each PP and PS.
- c. With diagram, mention the different layers of tetra pack.
- d. What is shrink wrapping? Give 2 application areas.
- e. Mention 4 properties required for food packaging.
- f. Mention 4 brands in dairy products with unique packaging applications.
- g. Elaborate on sustainable packaging, give 2 examples.

Q2 Answer the following questions. (Any 2) 12

- a. Give 2 properties and 2 applications each of PE and PVC.
- b. With a neat labelled diagram, explain the process of blister packaging.
- c. With a neat diagram explain the process of HFF seal machine.

Q3 Answer the following questions. (Any 2) 12

- a. Explain in details the process of bottle manufacturing.
- b. With a diagram, explain the process of manufacturing Bag in Box also give 2 application area.
- c. Explain in detail the process of sterilization.

Q4 Answer the following questions. (Any 2) 12

- a. Compare between thermosets and thermoplastics (Upto 6 point).
- b. Explain in details any 2 types of sealers used in packaging industry.
- c. What are the different consideration to be studied upon before the selection of package for meat products.

Q5 Answer the following questions. (Any 2) 12

- a. Explain dry lamination process with diagram. Also mention 2 application area.
- b. With proper diagram, explain the steps involved in manufacturing a stand up pouch.
- c. Compare MAP and CAP (Upto 6 point)

Q6 Answer the following questions. (Any 2) 12

- a. With examples, explain different types of closures.
 - b. Write packaging material in
 - 1) Cheese
 - 2) Milk
 - 3) Butter
 - 4) Biscuit
 - 5) Buttermilk
 - 6) Green peas
 - c. Write examples, explain different types & indicators and labels to assess shelf life of package.
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