

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

Course: English

Code:M101

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

Q.1 (A) Do as directed (any ten)**10**

- a. They are shouting loudly. (Add question tag)
- b. We can control the numbers of splitting atoms. (Change the voice)
- c. Always speak the truth. (Make it negative)
- d. There is nobody in the class. (Make it affirmative)
- e. I said to him, "My sister has gone out". (Change in to indirect speech)
- f. This news is too good to be true. (Remove too)
- g. Ram is the tallest boy in the class. (Change the degree)
- h. Rose is very beautiful. (Make it exclamatory)
- i. What a beautiful flower! (Make it assertive)
- j. She came here to see me. (Make it compound)
- k. We must eat, or we cannot live. (Make it simple)
- l. There are problems with the children. There are problems with their parents. (Use not only but also)

Q.1 (B) Fill in the blanks with suitable articles (a, an, the) (any four)**04**

- a. I want _____ apple from that basket.
- b. _____ church on the corner is progressive.
- c. I borrowed _____ pencil from your pile of pencils and pens.
- d. I bought _____ umbrella to go out in the rain.
- e. Please give me _____ cake that is on the counter.

Q.2 (A) Separates the clauses and name them (Any four).**04**

- a. It's the only thing that can save the city.
- b. I am aware that the system isn't fool proof.
- c. That shows you how cynical you have become.
- d. When he was young, he was just like you.
- e. After I am gone, I do not want any memorials.
- f. Tell us how we can get into the house.

Q.2 (B) Add Prefix and suffix.(any six)**06**

- a. _____ mobile
- b. _____ oxide
- c. _____ meter.
- d. _____ honest.
- e. _____ give.
- f. _____ sphere
- g. Treat _____
- h. Lord _____
- i. Mission _____
- j. Up _____
- k. Other _____
- l. For _____

Q.2 (C) Fill in the blanks with the appropriate form of verbs given in the bracket (Any four) **04**

- a. He (go) to polytechnic every day.
- b. He always (meet) her in the institute.
- c. See, how, he (run)
- d. I came in while he (sleep)
- e. He (travel) to Mumbai tomorrow.

Q.3 (A) Use the following phrases in your own sentences (Any six) **06**

- a. Come along
- b. Cut down
- c. Fall in
- d. Get back
- e. Give up
- f. Handover
- g. Pick up
- h. Settle down
- i. Show off
- j. Turn down

Q.3 (B) Insert the given adverb (any Four) **04**

- a. I have understood her. (never)
- b. He got dressed. (quickly)
- c. She realized her mistake. (at once)
- d. Could you switch the light? (off)
- e. It will rain this evening. (Probably)

Q.3 (C) Write a farewell speech for a Boss who is moving to a multinational company, **04**

Q.4 (A) Punctuate the following sentence (Any four) **04**

- a. do you sleep in the afternoon he asked?
- b. good morning daddy said the son to his father.
- c. hari said where have you been so long.
- d. he said oh help me be quick or I will be lost.
- e. the captain said follow my order.

Q.4 (B) i)Writes a letter to your friend asking him to spend a holiday with you. **08**

OR

ii)Write a letter to the Post Master of your town explaining that letters are not being properly delivered.

Q.5 (A) Read the passage carefully and answer the questions given below. **10**

Our country gave birth to mighty soul and he show like a beacon not only for India but also for the whole world. And yet he was done to death by one of our own brothers and compatriots. How did this happen? You might think that it was an act of madness, but that does not explain this tragedy. It could only occur because the seed for it was sown in the poison of hatred and enmity that spread throughout the country and affected so many of our people. Out of that seed grew this poisonous plant. It is the duty of all of us to fight this poison of hatred and ill will. If we have learnt anything from Gandhiji, we must bear no ill-will or enmity towards any person. The individual is not our enemy, it is the poison within him that we should fight and which we must put an end to.

Questions---

- a. Who is the mighty soul referred to in the passage?
- b. Why was he done to death?
- c. What do we learn from Gandhiji?
- d. What should we fight against in the individual?
- e. What is the poison referred to in this passage?

Q.5 (B) Attempt a summary of the above passage and suggest a suitable title. **04**

Q.6 (A) Write a short conversation between two friends about air pollution in cities. **06**

Q.6 (B) Combine sentence using Noun, Adverb and Adjective clauses (Any Six) **06**

- a. He will be late. That is certain.
 - b. He may be guilty. I cannot say.
 - c. He will not come in time. I am quite sure.
 - d. He met his old classmate. He is a judge now.
 - e. He owns a dog. The children are afraid of it.
 - f. Here is Drishti. I like her very much.
 - g. She is sick. She works hard.
 - h. He is poor. He does not complain.
 - i. It may rain. Take an umbrella.
 - j. Don't drop this glass. It will break.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any four questions.**20**

- a. What are the merits of communication in business?
- b. What are the objectives of communication?
- c. Explain the process of communication.
- d. What is verbal communication?
- e. What are the functions of non verbal communication?
- f. How can you improve your communication skill.
- g. The data collected by a non government organization on seasonal rainfall received (in cms) during the year 2001, 2002, 2003 and 2004 in four metropolitan cities in India is as follows.

	2001	2002	2003	2004
Delhi	250	225	200	225
Kolkata	300	250	200	275
Mumbai	300	250	225	300
Chennai	200	250	225	300

Q.2 Write an essay in about 250 words. (Any one)**12**

- a. Science and civilization
- b. The value of sports in life.
- c. Childhood Days.

Q.3 Answer any two questions.**12**

- a. A health camp has been organized by your school; write a notice informing the other students about it.
- b. You are in charge of project regarding 'traffic control' in your area. Draft a project report to the Road Transport Officer.
- c. In your institute the drama club is organizing a drama. Write a notice to be put up on the school notice board inviting students to participate in the drama.

Q.4 Answer following questions in about eight to ten lines. (any two)**12**

- a. What are the merits and demerits of written communication?
- b. Explain the essence of body language and clothes in an effective communication.
- c. Compare oral communication with written communication.

Q.5 Write a paragraph on any two of the following.**08**

- a. i) No pain no gain
ii) Talkers are no good doers.
iii) History repeats itself.

- b. Explain the Barriers of Communication

04

Q.6 A. Read the following passage carefully and answer the questions given below.

08

Patriotism means love for our country. It is a quality of both civilized and uncivilized nations. For Bushman in Africa and the most civilized man of the 20th century, his native land is the best place in the world. This love is not created by any artificial method, but, it is rooted deeply in our hearts, 'East or West, home is the best is a well known maxim. Our country appears to be the best place on the earth.

Patriotism is a noble sentiment. It gives us an interest in the fortunes of our country. It fills us with pride of its achievements, past or present. Under its influence men have done most heroic deeds that adorn, the pages of history. The history of the world is full of examples of persons who bore innumerable hardships for the sake of their motherland and finally went victorious in the achievement of their aim. Garibaldi suffered for years for the sake of his country. Rana Pratap sacrificed his all and wandered through jungles and forests eating wild grass and leaves of trees for the love of his Motherland. The self-sacrifice of Spartans at the pass of Thermopile for the defence of their country will remain inspiring example of patriotism for all time to come. Nelson talked of great truth when he said, "England expects every man to do his duty," Every country expects of its people such devoted and dutiful service in return for the motherly care it has bestowed on them.

Question:

1. What does patriotism mean?
2. What kind of sentiment is patriotism?
3. What does every country expect of its people?
4. Mention the names of some of great men who suffered great hardships for their country.

Q.6 B. Write a summary of the above passage and suggest a suitable title.

04

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any ten questions.**20**

- a. Name the types of units.
- b. Define Precision.
- c. Define acceleration.
- d. Define unit. Write one example.
- e. Define centrifugal force.
- f. Write long form of LASER.
- g. Define Refraction of light.
- h. Define Surface tension.
- i. Define viscosity.
- j. Define weak acid. Write its one example.
- k. Define POH, write its expression.
- l. Define electrolyte. Write one example.
- m. Define electroplating.
- n. What is Lewis concept of base? Give one example.

Q.2 Answer any three questions.**12**

- a. Define error. Write 3 types of error.
- b. Write three laws of conservation of energy.
- c. Write four applications of LASER.
- d. Explain difference between strong electrolyte & weak electrolyte.
- e. What are limitations of Arrhenius concept of acids and bases?

Q.3 Answer any two questions.**12**

- a. State and explain Newton's law of motion.
- b. Explain Arrhenius concept of acid and bases.
- c. Explain polarization with suitable, labeled diagram.
- d. Describe Stoke's law.
- e. Explain the Lewis concept of acid and base with its examples.

Q.4 Answer any two questions.**12**

- a. Distinguish between fundamental & derived quantities.
- b. Distinguish between centripetal and centrifugal force. (upto 4 points)
- c. Explain the cohesive and adhesive force with example.
- d. Write 4 properties of LASER.
- e. Explain electrolysis of aqueous solution of CuSO_4 by using Copper electrode.

Q.5 Answer any two questions.**12**

- a. Write any 4 characteristics of standard unit.
- b. Explain the terms work and energy. Write their MKS units.
- c. Explain significance of surface tension in printing technologies.

- d. Define properties of acid and base (two of each)
- e. 0.1987 gms of copper was deposited by current of 0.2 amperes in 50 min. What is the electrochemical equivalent (E.C.E) of copper?

Q.6 Answer any two questions.

12

- a. State four types of estimators error. Write their formulae (upto 4 points).
 - b. State and explain Newton's second law of motion.
 - c. Explain the term Diffraction of light with suitable diagram.
 - d. Distinguish between pH and pOH (upto 4 points).
 - e. State and explain Faraday's first law of electrolysis.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any five questions.**20**

- a. Discuss the need for mechanical drives.
- b. Differentiate between group drive and individual drive (any 4 points).
- c. Define the following terms i) friction ii) coefficient of friction
- d. Explain Pascal's law.
- e. Define i) Boyle's law ii) Charle's law.
- f. Define with units i) Current ii) Voltage iii) Resistance iv) Resistivity
- g. What is Kirchoff's current law? Explain with sign convention.

Q.2 Answer any two questions.**12**

- a. With the help of a neat sketch, define the following terms related to gear
i) Circular pitch ii) Addendum iii) Dedendum iv) Pitch circle
- b. What are cams & followers? Discuss their various applications.
- c. List different types of lubrication method used in printing machines and explain any one in detail.

Q.3 Answer any two questions.**12**

- a. Classify lubricants. Also discuss characteristics & applications of different lubricants.
- b. Explain the following terms used in hydraulics
i) Work ii) Horse power iii) Mechanical drive
- c. List different applications of hydraulics in printing. Also list advantages & disadvantages of hydraulic systems.

Q.4 Answer any two questions.**12**

- a. What are couplings? Sketch and explain any one type.
- b. List advantages, disadvantages & limitations of rope and chain drive (any 3 points each).
- c. With the help of neat sketch, explain the working of double acting air compressor.

Q.5 Answer any two questions.**12**

- a. Discuss centralized and decentralized compressed air systems.
- b. What are insulators? Discuss their characteristics & applications.
- c. Explain the following i) Leakage Current ii) Insulation Resistance

Q.6 Answer any two questions.**12**

- a. Explain on the basis of definition, formula & diagram i) coefficient of static friction ii) Angle of response
- b. Compare star connected load with delta connected load with the help formula and circuit diagram.
- c. Differentiate between good conductor, bad conductor, insulator (any 4 points). Also state Ohm's law.

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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.
3. Assume suitable data if necessary

Q.1 Answer any five questions.**20**

- a. Find mean of 23.1, 26.7, 33.2, 29.6, 12.5
- b. Find simple interest (Rs), principal amount is Rs 10000, rate is 10% and number of year are 10. (write formula)
- c. In a group of 10 students, 2 students have 40kg weight each and last 3 have 45kg each, 2 others have 48kg each and last 3 have 50kg each. Find mean weight (kg) of this group.
- d. Find the volume of sphere whose radius is 2.1cm
- e. Cost price is Rs125, profit required is 20% fixed selling price.
- f. A car covers 30,000 meters in 15 minutes. Find its speed in Kmph.
- g. A water tank is a cuboid of side 2m. Find its volume when it is half filled.

Q.2 Answer any three questions.**12**

- a. Distributes Rs. 182500 amongst P, Q, R in the ratio of 16:24:33
- b. Find compound interest for 7 years if rate is 7.5% and principal amount is Rs.75000 .Also calculate total amount after 7 years.
- c. A printer was purchased at Rs.2800 and sold at Rs 2250, calculate percentage loss.
- d. Find volume of a cone of height 5.6cm and base radius 6.3cm.
- e. Calculate mean, mode and median for 10, 10, 11, 12, 13, 10, 11, 11, 12, 10, 14. Also mention if mode and median are same for above reading.

Q.3 Answer any three questions.**12**

- a. Cost of dozen coffee mugs is Rs.300. How many dozen coffee mugs can be brought for Rs.7500.
- b. Find simple interest. P= Rs 22000, R=11%, N=33 years. Also calculate total amount after 10 years.
- c. Find volume of cylinder having radius 12cm and height 120cm.
- d. A man runs at a speed of 15kmph for first 2 hours and 12kmph for next 2 hours. Find average speed in kmph and calculate distance covered by him in one day if he runs without stopping.

Q.4 Answer any three questions.**12**

- a. Prices of a T-shirt & a trouser are Rs.750 and Rs.1750 receptively. If a discount of 10% on T-shirt and 15% on trouser is given, Find total cost.
- b. Cost of washing machine is Rs. 24000. It decreases by 10% every year (compound effect). Find cost after 5 years.
- c. Amar paints one house in 3 days, Akbar takes 5 days, Anthony takes 6 days. If they work for 30 days how many total houses will be painted.
- d. A bucket has 9 inch radius and 18 inches height, it can be filled in 2 min. Find how many bucket will be filled in 90 min. if rate of selling water is Rs.0.15 per sq.inch, then find total cost of selling water in one hour.
- e. Find mean, mode, and median for 39.2, 41.3, 43.4, 45.6, 47.8, 49, 45.5, 45.7, 45, 45.8.

p.t.o

Q.5 Answer any two questions.**12**

- a. A train travels at a speed of 20m/s for 2 hours and 25m/s for next 3hrs. Find average speed (m/s) and calculate distance covered in Km in 18 hrs, also calculate average speed in Kmph.
- b. Draw a graph for following reading of years and no.of visitors in a shopping mall per month.

	Viva	Pearl	Joy	Max
2018	2.5L	2L	1.8L	2.7L
2019	2.6L	1.8L	1.7L	2.8L

L = Lakh = 100000

If average purchase per person is Rs.100 in 2018, find total purchase cost

- c. Draw pie chart for the following

Process	Offset	Flexo	Gravure	Screen	Digital
% volume	34	19	12	10	25

Q.6 Answer any two questions.**12**

- a. The table below shows the sound in decibel in Mumbai during festival for 5 days. Draw line graph

Day	Mon	Tue	Wed	Thu	Fri
Sound(db)	72	82	89	85	92

Also calculate average sound for 5 days .

- b. Find time required to double the amount if rate of compound interest is 10% p.a Original amount is Rs.100000.
- c. Find the mode of the following distribution

Class interval	0-10	10-20	20-30	30-40
Frequency	7	5	11	13

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any five questions.**20**

- a. Define colour. Write wavelength range of visible colour spectrum.
- b. State the meaning of magnification and reduction, related to graphic original.
- c. Describe lens aberration and flare.
- d. Write names of any 3 recording media. State common unit which measures capacity of storage.
- e. Write conventional screen angles for offset printing.
- f. Define opacity and optical density.
- g. Write formula to calculate density. In which unit density is measured?

Q.2 Answer any two questions.**12**

- a. Explain subtractive colour theory with schematic diagram. State its example.
- b. Describe 3 factors governing selection of graphic original.
- c. Explain 3 characteristics of recording media.

Q.3 Answer any two questions.**12**

- a. Explain 3 properties of light. Write names of 3 light sources.
- b. Write 3 types and 3 characteristics of graphic original.
- c. Compare any 2 recording media.

Q.4 Answer any two questions.**12**

- a. Explain additive colour theory with schematic diagram. Also state its example.
- b. Find new exposure time when old exposure time is 10 seconds, old magnification is 40% and new magnification is 80%. Also state the formula.
- c. Describe working principle of CCD and CMOS.

Q.5 Answer any two questions.**12**

- a. Draw diagram to show effect of RGB light on
 - i) process magenta ink printed on white paper.
 - ii) process cyan ink printed over process magenta ink on white paper.
- b. Explain the steps to convert continuous tone picture into halftone picture.
- c. Define a) Focal length b) Depth of focus.
- d. Describe any 2 dot shapes.
- e. Starting from light to dark, write sequence of densities of 4 process colours (inks) in printing.

Q.6 Answer any two questions.**12**

- a. Describe working principle and construction of digital camera.
 - b. Explain AM and FM screening.
 - c. Explain construction and working of reflection densitometer with schematic diagram.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

- Q.1 Answer any five questions. 20**
- a. Write name and purpose of any four Binder's Marks.
 - b. How many sheets of paper are required to make i) 1 ream ii) 1 quire iii) 1 gross iv) 2.5 reams
 - c. Write 2 applications each of cutting machine and TKT (Three Knife Trimmer).
 - d. Write name of 4 companies related to binding and finishing operations.
 - e. Compare knife folding with buckle folding (4 points)
 - f. Describe page pull test and flex test related to perfect binding.
 - g. Write names of any 4 finishing operations.
- Q.2 Answer any two questions. 12**
- a. Write following ISO paper size in millimeter i) A0 ii) A5 iii) B0 iv) B5 v) C0 vi) C5
 - b. Write name and function of six parts of cutting machine.
 - c. Explain meaning of i) half cut ii) full cut iii) punch outline
- Q.3 Answer any two questions. 12**
- a. Explain principles of adhesion
 - b. Draw schematic diagram of combination folding machine.
 - c. Write name and purpose of any six parts of perfect binding machine.
- Q.4 Answer any two questions. 12**
- a. Write name of 2 securing materials. Also state 4 factors which determine their selection.
 - b. Describe construction and working of Gathering machine.
 - c. Explain following inline operations. i) slitting ii) trimming iii) perforating
- Q.5 Answer any two questions. 12**
- a. Write 4 properties & 2 applications of board.
 - b. Describe construction & working of Three Knife Trimmer.
 - c. Explain construction of book sewing machine.
- Q.6 Answer any two questions. 12**
- a. Explain working of knife folding with diagram.
 - b. Explain construction of case making machine
 - c. Write 2 characteristics And 1 application each of i) Hot Lamination ii) Cold lamination
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any eight questions.**16**

- a. State 2 limitations of print media.
- b. Give 2 names of non-absorbent substrates.
- c. List any 2 light sources in plate making.
- d. What do you mean by perfecting press?
- e. State any 2 raw materials used in perfect binding.
- f. Define i) Ream ii) Quire.
- g. State any 2 names of conventional printing process.
- h. State 2 types of original.
- i. List any 2 materials required in plate making.
- j. State any 2 limitations of inline press.
- k. Name any 2 binding styles.
- l. Name any 2 printing ink manufacturers.

Q.2 Answer any two questions.**12**

- a. Draw general workflow of printing process & explain function of each department.
- b. List two types of PS plate & explain negative working plate.
- c. Explain with diagram i) CIC press ii) Stack press

Q.3 Answer any three questions.**12**

- a. Differentiate upto 4 points between sheetfed & web feed machine.
 - b. List 4 ingredients of ink with 1 function each.
 - c. Explain with diagram sheetfed machine unit.
 - d. Explain center stitching method.
 - e. Write short note on need of graining & counter etching.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any four questions.**16**

- a. Draw schematic diagram of flexographic printing process.
- b. Write four applications of gravure process.
- c. Write name and purpose of any four materials used in screen printing process.
- d. Write names of four software used for color correction or designing in printing industry.
- e. Write names of four companies manufacturing digital printer.
- f. Write four characteristics of ISO paper sizes

Q.2 Answer any three questions.**12**

- a. Compare flexography with offset process (4 points)
- b. Compare gravure with screen printing (4 points)
- c. Write four applications of screen printing process.
- d. Write four characteristics of digital printing process.

Q.3 Answer any two questions.**12**

- a. Draw schematic diagram of processed photopolymer flexo plate. State it's two characteristics.
 - b. Write steps in making gravure cylinder preparation.
 - c. Write three characteristics each of digital printing and screen printing process.
 - d. Write three characteristics each of inkjet and electrophotography process.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

- Q.1 Answer any five questions. 20**
- a. State 4 advantages of recycled paper.
 - b. State the meaning of brightness and gloss of paper.
 - c. State any 4 factors affecting cost of paper.
 - d. Define viscosity and tack of ink.
 - e. State the meaning of i) Rub & scuff resistance ii) Light fastness of ink.
 - f. Write short note on radiation drying of ink.
 - g. State the meaning of pulp & paper.
- Q.2 Answer any two questions. 12**
- a. Explain i) Bursting strength ii) Grain direction of paper.
 - b. Write short note on ink additives i) Plasticizers ii) Waxes iii) Accelerators.
 - c. Explain construction & working of ball mill & state application.
- Q.3 Answer any two questions. 12**
- a. Write short note & application of i) Magnetic ink ii) Invisible ink iii) Thermochromic ink
 - b. Differentiate upto 6 points - chemical and mechanical pulping.
 - c. Describe any 3 finishing operations related to paper manufacturing.
- Q.4 Answer any three questions. 12**
- a. Explain role of dandy roller in paper manufacturing.
 - b. Write short note on green printing.
 - c. Explain ink absorbency & folding endurance of paper.
 - d. Explain types of pigment with two examples.
 - e. State 4 properties of food grade ink.
- Q.5 Answer any two questions. 12**
- a. Explain any 2 chemical components related properties of paper.
 - b. State properties of cigarette paper & security paper.
 - c. Write function of vehicles & solvents in ink.
- Q.6 Answer any two questions. 12**
- a. List 4 sources of cellulose fibers & explain heat seal resistance property of ink.
 - b. Explain dimensional stability & grammage of paper.
 - c. State general formulation & properties of flexo ink with application.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any eight questions.**16**

- a. Name the different marks used on image carrier.
- b. Basic principle of lithography process.
- c. Define graining.
- d. What is meaning of exposure & state its function.
- e. Name two different chemical used in plate making.
- f. Name two basic materials of lithographic plate.
- g. What is light sensitive coating?
- h. Draw schematic diagram of lithographic & gravure image carrier.
- i. What is waterless plate?
- j. Name two light sources used for plate making.
- k. What is P.S. positive plate?
- l. Define surface treatment.

Q.2 Answer any three questions.**12**

- a. Explain the meaning of imposition. Name the different imposition schemes used in book work. Draw diagram of any one imposition scheme.
- b. Explain CTP process with flow chart.
- c. Write importance of graining and write graining methods.
- d. Name two equipments used in lithographic image carrier with schematic diagram.
- e. Explain waterless lithographic plate making process and its advantages with schematic diagram of image carrier.

Q.3 Answer any three questions.**12**

- a. Write advantages of CTP plate.
 - b. Name the base materials used for plate making (any four).
 - c. Write stages of PS plate making process.
 - d. Write optical and physical properties of film.
 - e. What is role of temperature, humidity, pH and transmission density in plate making department.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

Course: Print 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

Q.1 Answer any five questions.**20**

- a. What is purpose of pallet rack? Draw schematic diagram of it.
- b. What is a meaning of FIFO & LIFO?
- c. What is meaning of maintenance. State its importance? (2 points)
- d. Name any four lubricants.
- e. Name four different transportation equipments used in printing press.
- f. Name four sources of waste generation in printing press.
- g. Explain meaning of pallet & name the material used for it.

Q.2 Answer any two questions.**12**

- a. Name the different types of maintenance procedures used, explain any one procedure.
- b. Explain roll (web) handling equipments used in packaging press & warehouse. Name two equipment.
- c. With neat diagram explain counter balance walkie stacker.

Q.3 Answer any two questions.**12**

- a. Describe the function of lubrication.
- b. What is the planned maintenance and give its four advantages.
- c. How to reduce the waste generation in each stage of printing & post print process.

Q.4 Answer any two questions.**12**

- a. Write six points to be considered while planning to purchase printing machine.
- b. What is meant by warehouse? Describe two requirements for good warehouse.
- c. Explain any one type of bearing & write its two advantages, with schematic diagram.

Q.5 Answer any two questions.**12**

- a. Name four different types of bearings used in industry. Write two reasons of failure of bearing.
- b. Explain the surface tension & viscosity of lubricant.
- c. Explain TPM & state need of TPM (2 points).

Q.6 Answer any two questions.**12**

- a. What are the advantages of personnel training & retraining?
 - b. How to increase the efficiency of machinery and how it affects the coasting.
 - c. While purchasing new machinery, write 6 points to be considered.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

- Q.1 Answer any five questions. 20**
- a. Compare colour with light upto 4 points.
 - b. Explain Metamerism.
 - c. Explain adaption and its types.
 - d. Define tristimulus values of colour.
 - e. Write 2 advantages & 2 limitations of CIELuv color space.
 - f. Write 4 requirements of ideal graphic reproduction.
 - g. Describe Gray scale.
- Q.2 Answer any two questions. 12**
- a. Draw schematic diagram of subtractive colour theory & state its 4 characteristics.
 - b. Explain construction and working of densitometer with schematic diagram.
 - c. Explain spectral behavior (errors of trichromatism) of yellow, magenta & cyan ink.
- Q.3 Answer any two questions. 12**
- a. Explain functions of rods & cones of human colour vision system.
 - b. Explain construction & working of spectrophotometer.
 - c. Explain moiré defect state its 2 causes & 2 remedies.
- Q.4 Answer any two questions. 12**
- a. Explain Munsell & Pantone physical colour specification systems.
 - b. Explain CIELaB colour space with neat diagram.
 - c. Explain construction & application of colour control patch.
- Q.5 Answer any two questions. 12**
- a. Explain line spectrum & continuous spectrum.
 - b. Explain construction & working of colourimeter.
 - c. Explain additivity & proportionality failures.
- Q.6 Answer any two questions. 12**
- a. Define colour temperature. State colour temperature of any 4 illuminants with proper unit.
 - b. Describe 2 characteristics each of any 3 illuminants.
 - c. Write formula to calculate hue error, grayness and trapping percentage.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

- Q.1 Answer any five questions. 20**
- a. State any 4 objectives of management
 - b. Define management and state its 2 functions.
 - c. State 4 advantages of single ownership business organization.
 - d. Mention types of inventories with one example each.
 - e. State 4 features of copyright act.
 - f. Describe functions of production, planning & control department.
 - g. List 2 attributes to be considered for control chart.
- Q.2 Answer any two questions. 12**
- a. Explain any 3 functions of management.
 - b. Define quality & explain the concept of quality assurance.
 - c. Explain SPC & state its 4 objectives.
- Q.3 Answer any two questions. 12**
- a. State 2 functions each of production, marketing & stores department.
 - b. Explain features in implementation of 5S concept.
 - c. Define control chart & list its types.
- Q.4 Answer any two questions. 12**
- a. Write short note on joint stock business organization with 2 disadvantages.
 - b. Define demand and explain law of demand.
 - c. List types of production and state ISO standards for ink and paper.
- Q.5 Answer any two questions. 12**
- a. Explain concept of Kaizen.
 - b. Define variation & explain its types.
 - c. List & explain any 6 provisions in factories act.
- Q.6 Answer any two questions. 12**
- a. State 3 functions each of administration department & print production department.
 - b. State 4 qualities of leadership and name 2 national unions in India.
 - c. Explain with example how control charts are used for process capability.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

Course: Costing & 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

Q.1 Answer any five questions.**20**

- a. Define costing and write two advantages of costing.
- b. Write ink consumption formula and state its meaning.
- c. Compare actual and budget expenses.
- d. What are the factors considered for the rate of binding and finishing?
- e. What is daily docket? Explain.
- f. Define estimating and write its purpose.
- g. Write following paper sizes i) Foolscap ii) Demy iii) BO iv) AO

Q.2 Answer any two questions.**12**

- a. Explain hourly cost rate and machine cost rate with their two applications.
- b. State 2 subdivisions and 2 multiples of one ISO and one British standard paper sizes.
- c. What is GST? What are the provisions are made for printing industry under GST?

Q.3 Answer any two questions.**12**

- a. What are the factors affecting profit? Explain.
- b. Explain the following i) Invoice ii) Stock record
- c. Write six qualities of an estimator.

Q.4 Answer any two questions.**12**

- a. What is a tender? Explain technical specification in a tender document.
- b. Define time rate and work rate systems and their application in costing.
- c. Find out A1 size ream required for printing 20000 copies of 96 pages of A5 size of book.

Q.5 Answer any two questions.**12**

- a. Name the types of costing techniques and their applications.
- b. State the importance of sequences of operations and time required for each operation.
- c. Discuss disputes about delayed payments.

Q.6 Answer any two questions.**12**

- a. State names of six tools required by an estimator.
 - b. Explain delivery and sales report and its importance.
 - c. What is cost control system? How cost is reduced?
-

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any four questions.**16**

- a. What is definition of entrepreneur? Describe importance of entrepreneurship.
- b. Name four different types of departmental purchases of printing press.
- c. What is a role and scope for small scale industry?
- d. Write eight points to be considered for starting up small scale industry.
- e. Which are the steps to be followed after deciding about small scale industry startup.
- f. State four function of Entrepreneur.
- g. Name the different storage required for printing press.

Q.2 Answer any three questions.**12**

- a. Describe the contents of project report for small printing press.
- b. Write the reasons for the failure of entrepreneur venture (any 4).
- c. State four qualities of an entrepreneur.
- d. State any four factors required to fix the location of a business.
- e. What is meaning of inventory & name the different classifications of inventory stock.

Q.3 Answer any three questions.**12**

- a. What is process of procurement of finance for press?
 - b. Describe the meaning of EOQ.
 - c. State four functions of material management.
 - d. Describe any one method of stock verification.
 - e. Describe any one method of sales promotion.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any four questions.**16**

- a. Write importance of environmental science.
- b. Distinguish between renewable and non-renewable energy sources.
- c. Write any 4 physical hazardous materials in printing industry.
- d. Write remedial measures during handling of chemicals in printing industry.
- e. Distinguish between natural and man-made disasters.
- f. Define cyclone. Write three types of cyclones.

Q.2 Answer any three questions.**12**

- a. Define environmental science. Write any 2 activities to create awareness about environment in general public.
- b. Write classification of environmental pollution.
- c. Describe two causes of drought.
- d. Define VOC. State 3 names of VOC.
- e. Write any 2 preventive techniques to minimize the generation of waste water in printing industry.

Q.3 Answer any two questions.**12**

- a. Write the effect of deforestation to the environment.
 - b. Write the uses of soil.
 - c. Write the remedial techniques to stop exploitation of water.
 - d. Write the precautionary measures taken before flood.
-

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

- Q.1 Answer any five questions. 20**
- a. List four film requirements for gravure image carrier.
 - b. List four advantages of common shaft drive.
 - c. Explain advantages of electro static assist.
 - d. Explain composition of gravure ink.
 - e. Differentiate surface printing inks from lamination inks upto 4 points.
 - f. List two problems encountered in gravure printing also list causes and remedy.
- Q.2 Answer any two questions. 12**
- a. Describe construction and working principle of electroplating unit.
 - b. Elaborate chemical etching method for gravure cylinder.
 - c. Describe construction of doctor blade holder with suitable diagram.
- Q.3 Answer any two questions. 12**
- a. Compare gravure printing process with offset printing process up to six points.
 - b. What is static and dynamic balancing? State 4 function's of balancing.
 - c. Describe construction and workings principle of electronic engraving unit.
- Q.4 Answer any two questions. 12**
- a. Compare integral shaft cylinder with demountable shaft cylinder assembly.
 - b. Compare electronic engraving and chemical etching upto six points.
 - c. Compare gravure ink and offset ink upto six points.
- Q.5 Answer any two questions. 12**
- a. Explain any four variables of electroplating.
 - b. List six advantages of laser engraving.
 - c. Describe doctor blade setting procedure.
- Q.6 Answer any two questions. 12**
- a. Justify why copper is most suitable metal for gravure image carrier.
 - b. Describe stages in copper plating along with reactions at cathode and anode.
 - c. Describe purpose, construction and working of gravure proofing machine.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any five questions.**20**

- a. List two advantages and two characteristics of flexographic printing process.
- b. Write four applications of flexographic printing process.
- c. Describe classification and features of flexographic image carrier.
- d. List four advantages of chambered doctor blade system.
- e. Draw schematic of stack type flexographic printing machine.
- f. Compare water based ink and solvent based ink upto four points.

Q.2 Answer any two questions.**12**

- a. Compare flexographic printing process with offset printing process upto six points.
- b. Describe stages involves in liquid photopolymer plate making.
- c. Explain common impression flexographic press with neat diagram.

Q.3 Answer any two questions.**12**

- a. Explain any six requirements of film used for flexography.
- b. Describe construction of integral and demountable plate cylinder.
- c. Explain reverse angle ink metering for flexography.

Q.4 Answer any two questions.**12**

- a. Describe parts of flexographic image carrier.
- b. Describe any two problems, causes and remedies associated with flexographic printing unit.
- c. Describe working and construction of standard two roll inking system.

Q.5 Answer any two questions.**12**

- a. Explain the video plate mounting system for flexographic plate mounting.
- b. Describe construction and working of tympan bar.
- c. State six factors that govern the selection of an anilox roll.

Q.6 Answer any two questions.**12**

- a. Explain design considerations for flexography image carriers.
 - b. Explain any one drying system used on flexography press.
 - c. Describe four end use requirements of flexographic products.
-

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

- Q.1 Answer any five questions. 20**
- a. Explain storage and climatic challenges forced by packaging.
 - b. State 2 properties of each.
i) Food grade board ii) Corrugated Board.
 - c. Explain manufacturing process of 3 piece can with diagram.
 - d. Explain any 2 post manufacturing treatments in bottle manufacturing.
 - e. State factors affecting cost of carton making.
 - f. Explain drop test and crush resistance test.
 - g. Explain any 2 secondary functions of package.
- Q.2 Answer any two questions. 12**
- a. Explain 3 primary function of package.
 - b. Explain with diagram corrugated board manufacturing process.
 - c. Explain life cycle of package with neat diagram.
- Q.3 Answer any three questions. 12**
- a. State 1 purpose & 1 advantage of i) paper board ii) metal iii) glass iv) plastic.
 - b. Use the 2 carton styles & write its 2 application each.
 - c. State 2 advantages & 2 disadvantages of metal collapsible tubes.
 - d. Explain stack test & seal strength test.
 - e. Explain function of stitching machine & scoring machine in carton packaging.
- Q.4 Answer any two questions. 12**
- a. Name any 2 Cushioning materials & state its 1 purpose & 1 advantage of each.
 - b. List any 2 metals used in packaging & state 4 characteristics & 2 applications of any one of them.
 - c. Explain with diagram glass bottle manufacturing process.
- Q.5 Answer any two questions. 12**
- a. Explain with application primary, secondary & tertiary package.
 - b. Write ingredients of glass. List 4 limitations of glass.
 - c. State 2 advantages & 2 disadvantages of aerosols.
 - d. State 4 different types of flutes & explain any one of them.
 - e. Draw neat labeled diagram of RTE cartons. Having 5cm x 4cm x 5cm dimensions.
- Q.6 Answer any three questions. 12**
- a. Explain with diagram manufacturing of two piece cans.
 - b. Explain FEFCO international standards.
 - c. Name 2 software used to design package & state 2 advantages of using software for carton designing.
 - d. Explain i) Lacquering for metals ii) ECMA function.
 - e. Explain manufacturing process of collapsible tube.

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any five questions.**20**

- a. Write names of 4 companies that manufacture offset printing machine.
- b. Write 4 applications of offset printing.
- c. Describe working of side lay and front lay.
- d. Write PH range, conductivity range, ideal temperature, hardness range related to dampening solution.
- e. Describe any 2 external drying systems.
- f. Write purpose of star target, colour control bar.
- g. State meaning of 'set-off'. How it can be eliminated?

Q.2 Answer any two questions.**12**

- a. Explain principle of offset printing process.
- b. Explain composition of dampening solution.
- c. Define undercut, cylinder gap with schematic diagram.

Q.3 Answer any two questions.**12**

- a. Describe working of any 3 types of dampening systems.
- b. Explain construction & working of delivery unit.
- c. State meaning of i) scum ii) dot gain iii) mis-register. Also state 1 remedy each.

Q.4 Answer any two questions.**12**

- a. Write name & purpose of any 4 parts of feeder unit.
- b. Explain construction & working of multi roll inking system.
- c. Write name & 1 characteristic each of 2 types of gear used on offset machine. Also draw diagram.

Q.5 Answer any two questions.**12**

- a. Write name & 2 characteristics each of roller covering material.
- b. Explain working of single sheet feeder & stream feeder.
- c. Write 4 characteristics of ideal blanket.

Q.6 Answer any two questions.**12**

- a. How feeding unit (feeder) is set?
 - b. Write 3 problems related to inking system. Also state 1 remedy each.
 - c. Write 2 applications & explain construction of metal decorating press.
-

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

Course: Presswork Web

Code:506

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

- Q.1 Answer any five questions. 20**
- a. Describe the application of bustle wheels.
 - b. Write names of two devices used to check registration during machine run.
 - c. Write name of four companies manufacturing web printing machines.
 - d. Write names of four inline operations performed on web machines.
 - e. Write names of any two zones of web tension on machine. State unit of web tension.
 - f. State two characteristics of inline press.
 - g. State four applications of punching operation.
- Q.2 Answer any two questions. 12**
- a. Explain how infeed of web is different than sheetfed machine. Write names of 2 accessories and their function.
 - b. Describe any three reel locations.
 - c. Draw schematic diagram of former folder.
- Q.3 Answer any two questions. 12**
- a. Explain operation of flying splicer.
 - b. Explain construction of high velocity hot air dryer.
 - c. Describe working of compensator roller.
- Q.4 Answer any two questions. 12**
- a. State two applications of slitting. Draw diagram of two slitter types.
 - b. Draw schematic diagram of stack type 4 colour blanket to blanket printing unit. Show web path.
 - c. Explain working of dancer roller.
- Q.5 Answer any two questions. 12**
- a. Explain construction and working of 3 arm revolving reel stand.
 - b. Explain construction & working of jacketed chill roll.
 - c. Describe the use of electronic device used to check registration.
- Q.6 Answer any two questions. 12**
- a. Explain 'S' wrap of rollers & web in the infeed.
 - b. Describe construction & draw schematic diagram of jaw folder.
 - c. Write two troubles, their causes & remedies related to web printing.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

Q.1 Answer any five questions.**20**

- a. Write 2 examples each of VDP and POD.
- b. Write 2 characteristics each of selenium and organic photo conductor.
- c. Write 2 applications each of magnetography & ion deposition.
- d. Write 2 troubles and their remedies related to digital printing.
- e. Describe the measuring of hard proofing and soft proofing.
- f. Write names of 2 companies that develop RIP software.
- g. Write importance of memory & processor in digital printer.

Q.2 Answer any two questions.**12**

- a. Compare conventional printing with digital printing (6 points)
- b. Explain working of Electrophotography with diagram.
- c. Draw schematic diagram of inkjet process and write its 4 characteristics.

Q.3 Answer any two questions.**12**

- a. Compare dry toner with liquid toners.(6 points)
- b. Write name of 6 substrates and also state 3 required properties related to large format printing.
- c. Explain proofing parameters of SWOP proofing.

Q.4 Answer any two questions.**12**

- a. Describe working of charge generation and charge transport material in latent image formation.
- b. Explain general composition of inks used in inkjet printing.
- c. Explain functions of RIP.

Q.5 Answer any two questions.**12**

- a. Write 2 advantages, 2 limitations & 2 applications of digital printing.
- b. Describe thermal transfer process. State its 2 applications.
- c. Write 4 preflight checks. State its 2 advantages.

Q.6 Answer any two questions.**12**

- a. Compare inkjet and electrophotography (6 points)
 - b. State six technical specifications of large format printer.
 - c. i) Write name of 3 companies that manufacturer large format printer.
ii) Write 3 specifications of GRACOL.
-

Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

Course: Electronic Colour 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

- Q.1 Answer any five questions. 20**
- a. State function of rods & cones.
 - b. State 4 factors affecting scan quality.
 - c. Define pixel & resolution.
 - d. State 2 advantages of colour management.
 - e. Define dot gain & trapping.
 - f. Write purpose of screen angles & state set of angle used in offset printing.
 - g. Define & state purpose of test charts.
- Q.2 Answer any two questions. 12**
- a. Difference upto 6 points between AM & FM screening.
 - b. Explain with labeled diagram - working of PMT.
 - c. Explain rendering intent & perceptual rendering intent.
- Q.3 Answer any three questions. 12**
- a. State purpose & functions of RIP.
 - b. Explain purpose of black point compensation.
 - c. Differentiate upto four points raster & vector image.
 - d. State 2 advantages of device independent color. Name any one such system.
 - e. Define trapping and state its formula.
- Q.4 Answer any two questions. 12**
- a. Calculate trapping value of colours if density of 1st colour printed is 1.12 and 2nd colour being 0.87, density of overprint is 1.89.
 - b. State 4C's of color management & explain any two.
 - c. Explain with labeled diagram working principle of flatbed scanner.
- Q.5 Answer any two questions. 12**
- a. Explain working principle of densitometer.
 - b. Describe meaning of PDL & state 2 advantages of PDF format.
 - c. Define color management, colour gamut & saturation intent.
- Q.6 Answer any two questions. 12**
- a. State formula & terminologies of ΔE . Calculate the value of ΔE for the set of following values, L_1 -55, L_2 -50, a_1 -30, a_2 -25, b_1 -20, b_2 -18.
 - b. Explain the meaning of UCR & GCR
 - c. Explain with workflow, the purpose of preflighting.
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Government Institute of Printing Technology, Mumbai

Odd Term End Theory Examination November/December 2022

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

- Q.1 Answer any five questions. 20**
- a. Write four properties of LDPE.
 - b. Write two applications of PVC & also draw its chemical structure.
 - c. Describe bag in box process in short.
 - d. Draw a diagram of layers of laminate.
 - e. Name any two requirements of dairy products.
 - f. Write barrier properties required for packaging of food products.
 - g. Describe concepts of sustainable packaging
- Q.2 Answer any two questions. 12**
- a. Write properties and two applications of polypropylene (PP) with its chemical structure.
 - b. Explain dry lamination process with diagram.
 - c. Describe in details concept of aseptic packaging.
- Q.3 Answer any two questions. 12**
- a. Describe blown film extrusion process.
 - b. Compare in between shrink and stretch wrapping.
 - c. Explain requirement of edible packaging diagram.
- Q.4 Answer any two questions. 12**
- a. Name four properties and two applications of polystyrene (PS).
 - b. Describe any two types of closures.
 - c. Describe in short MAP process.
- Q.5 Answer any two questions. 12**
- a. Describe blister packaging in details with neat diagram.
 - b. Describe HFF machine with neat diagram.
 - c. Explain intelligent and active packaging.
- Q.6 Answer any two questions. 12**
- a. Describe co-extrusion process in detail.
 - b. Explain the requirement of frozen food packaging.
 - c. Elaborate what is CAP in packaging.
-