

[Total No. of Questions: 12]

[Total No. of Printed Pages: 1]

UNIVERSITY OF PUNE

[4364]-188

B. E. (Printing) Examination - 2013

Technology of Gravure and Flexo(2003 Course)

[Time: 3 Hours]

[Max. Marks: 100]

Instructions:

- 1 Answers to the **two sections** should be written in **separately**.
- 2 Draw neat diagram wherever necessary.

SECTION - I

Q.1 A Describe in detail Gravure printing unit along with its applications 18

OR

Q.1 A Explain along with features Inline Flexo Press 18

Q. 2 A Explain pneumatic and hydraulic impression loading system 16

OR

Q. 2 A Explain positive and reverse angle doctor blade system 16

Q. 3 A Explain the role of idle rollers on a Gravure press 16

OR

Q. 3 A State Causes and Remedies of the following: 16
1) Screening
2) Hickeys
3) Wrinkles
4) Missing prints

SECTION II

Q. 4 A Explain in detail engraving of an anilox roller 18

OR

Q. 4 A Explain the fountain roll inking system of a flexo press 18

Q. 5 A Explain types of pressurization system of Gravure Press 16

OR

Q. 5 A Explain the effect of pressure and speed on Gravure print quality 16

Q. 6 A Explain in detail standardization of a Gravure press 16

OR

Q. 6 A Explain in detail fingerprinting of a flexo press. 16

[Total No. of Questions: 6]

[Total No. of Printed Pages: 1]

UNIVERSITY OF PUNE

[4364]-192

B. E. (Printing) Examination - 2013

Study of Package Design & Materials (2003 Course)

[Time: 3 Hours]

[Max. Marks: 100]

Instructions:

Solve 3 questions from each section.

SECTION - I

- Q.1 Define a Package. Explain importance of packaging in detail. 16
- OR**
- Q.1 Discuss importance of packaging in extreme climate areas 16
- Q.2 Write notes on: 18
- i) Duplex ii) Craft paper iii) Adhesives
- OR**
- Q.2 Discuss Parameters affecting quality and strength of boards. 18
- Q. 3 Discuss Die making and machine used for punching. 16
- OR**
- Q. 3 Explain Die making process in detail 16

SECTION II

- Q. 4 Discuss Flexographic Process for Package Printing with limitations. 18
- OR**
- Q. 4 Discuss Duplex board Printing and problems associated 18
- Q. 5 Explain any 3 test on a ready package. 16
- OR**
- Q. 5 Describe Bursting strength testing machine in detail. 16
- Q. 6 Describe costing of a corrugated carton with examples. 16
- OR**
- Q. 6 Explain the impact of packaging on global warming. 16

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[4364]-181

B. E. Theory Examination April/may 20013

BE Printing (2003 Course)

**Costing-Estimating, Project Management and
Operation research**

Total No. of Questions : 6

[Total No. Of Printed Pages: 4]

[Time : 3 Hours]

[Max. Marks:100]

Instructions :

- 1) All questions are compulsory.
 - 2) *Assume suitable data, if necessary.*
 - 3) *Answers to the two sections should be written in separate answer-books.*
 - 4) *Neat diagrams must be drawn wherever necessary.*
 - 5) *Black figures to the right indicate full marks.*
 - 6) *Use of logarithmic tables, slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.*
-

SECTION 1

Q.1 a) Prepare a cost sheet from the following data [8]

ABC Pvt. Ltd., a stationery manufacturing company, produces two types of items, as A- for the school and B- for the office. From the following available, prepare cost sheet for the item A and B.

Direct material – A: 27,300/- B: 97,850/-

Direct labour -A : 15,600/- B: 61,800/-

Direct expenses – A : 6240/- B: 26,780/-

Factory overheads are charged at 75% on labor cost. Administrative overheads are charged at 25% on factory cost. Selling and distribution overheads A : 25/- and B: 55/- per unit Profit : 10% for both the items
Items sold A: and B: 206

b) Comment on the following [8]

- i) Marginal cost
- ii) Standard cost

OR

Q.1 a) Prepare a cost sheet from the following data [8]

The standard production of a particular product is 20 units / day and the rate of wages is Rs. 60/- per unit, if daily production is 20 units per day more. The rate of wages is Rs. 50/- per unit if the production is less than 20 units per day. Cost of material is Rs. 30/- per unit. It is proposed to charge factory overheads according to one of the following method,

i) 80% on prime cost, ii) 100% on labour cost

Calculate the data in the form of suitable statement, finding out factory cost per unit under each of the above method, if daily production is 15 units, 20 units and 25 units.

b) Comment on the following : [8]

Product cost

Process cost

Q.2 a) Explain the term Globalization with respect to Printing Industry. [8]

b) Differentiate between Perfect competitive, Monopoly and Monopolistic market with suitable examples. [8]

OR

Q.2 a) Explain in detail the element of Direct costs with suitable examples. [8]

b) Explain in detail the element of Indirect costs with suitable examples [8]

Q.3a) Explain the project scheduling and economical feasibility with the help of any appropriate example [9]

b) How to ensure the quality of the project? Explain with the suitable Example. [9]

OR

a) What is Project Management? Explain all the facets of Project Management. [9]

b) Explain the characteristics to become a successful project manager. [9]

SECTION 2

Q.4) Consider a task of ISO 9000 quality certification for an organization. The activity involved dependence and estimated duration are as given below. [16]

Activity	Dependence	Estimated duration		
		to	tm	tp
A	-	7	4	1
B	-	9	6	3
C	A	14	5	2
D	C	3	2	1
E	A, B	18	9	6
F	D	27	18	9
G	D, E	40	20	10
H	F, G	18	9	6
I	D, G	28	10	4
J	A, B	5	5	5

Find total Float, Free float and Independence Float.

Q.5 $Z \text{ min} = 12x_1 + 20x_2$ [16]
 Subjected to,
 $6x_1 + 8x_2 > 100$
 $7x_1 + 12x_2 > 120$
 $x_1, x_2 > 0$

OR

Q.5 $Z \text{ max} = 10x_1 + 20x_2$ [16]
 Subjected to,
 $3x_1 + 2x_2 < 1200$
 $2x_1 + 6x_2 < 1500$
 $x_1 < 350$
 $x_2 < 200$

Q.6 Find the job sequence to minimize total time in sequence A, B, C and find idle time for machine B and machine C [8]

Job	1	2	3	4	5
A	8	10	6	7	11
B	5	6	2	3	4
C	4	9	8	6	5

b) Find the minimum transportation cost

[10]

	1	2	3	4	
A	4	6	8	13	50
B	13	11	10	8	70
C	14	4	10	13	30
D	9	11	12	8	50
	25	35	105	20	

OR

Q.6. a) Solve Assignment problem

[10]

	I	II	III	IV	V
1	11	17	8	16	20
2	9	7	12	6	15
3	13	16	15	12	16
4	21	24	17	28	26
5	14	10	12	11	13

b) Derive the relation for EOQ for inventory model.

[8]

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[4364-182]

B.E.(Printing) Examination 2013

Surface Preparation II

(2003 pattern)

Time-Three hours

Maximum Marks-100

[Total No. of Question=12]

[Total no. of printed pages= 2]

Instructions:

- (1) Answer to the TWO sections should be written in separate answer books
 - (2) Neat diagrams must be drawn whenever necessary.
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-

SECTION-I

Q.1 (a) Describe in detail Rubber plate-making. (18)

OR

Q.1 (a) Explain in detail Design requirements for Flexography. (18)

Q.2 (a) Describe the effect of Back and main exposure on plate reproduction. (16)

OR

Q.2 (a) Calculate distortion factor and new negative length for 2.84 mm plate.
Thickness having printed length of 20cm. (16)

Q.3 (a) Explain in detail processing of 1.7 mm PP Flexo Plate. (16)

OR

Q.3 (a) Explain on press and off press flexo plate mounting technique. (16)

SECTION-II

Q.4 (a) Describe in detail Digital flexo plate-making. (18)

OR

Q.4 (a) Explain in detail stages involved in optimization of a Flexo Plate. (18)

Q.5 (a) Explain in detail Chemical Etching of a Gravure cylinder. (16)

OR

Q.5 (a) Explain the electronic engraving of a Gravure cylinder. (16)

Q.6 (a) Explain in detail plating variables for Gravure cylinder making. (16)

OR

Q.6 Write notes on. (16)

1. Role of Copper and Chrome 2. Gravure Cell structures

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[4364-183]

B.E.(Printing) Examination 2013

Offset Mechanics-II

(2003 pattern)

Time-Three hours

Maximum Marks-100[Total

No. of Question=6]

[Total no. of printed pages= 2]

Instructions:

(1)All questions are compulsory.

(2)Answer to the TWO sections should be written in separate answer books

SECTION-I

Q.1 Explain the following (Any Two). (16)
1.Draw neat diagram of vertical and horizontal presses.Explain their differences.

2.Explain working of dancer roller with the help of neat diagram.

OR

Q.1 Explain the following. (16)

1.Basement reel stands.

2.Splice arm

3.H type and Y type press configuration

4.Reel structure

Q.2 1.Explain flapper bar and brush dampening system. (8)

2.Explain metal backed blanket. (8)

OR

Q.2 Explain

1.Arithmetic of packing for blanket cylinders.

2.Plate bending mechanism

Q.3 1.Explain different stages of setting of ink in web offset. (18)

OR

Q.3 1.State working of ribbon folder and explain its utilities. (9)

2.List down various parts of jaw folder and its significance. (9)

Q.4 1.What is web tension in printing unit?How does fountain solution and ink govern them?

OR

Q.4 Explain the effect of moisture in paper on web tension. Which section of press has more chances of web break in machine and why? (18)

Q.5 Explain use and function of remote console and plate scanner on web presses. (16)

OR

Q.5 What is total productive maintenance? Explain its importance with respect to web offset and newspaper production. (16)

Q.6 Explain remedies for the following. (16)

1. Roller glazing
2. Doubling
3. Slur
4. Dot spread on print

OR

Q.6 Explain following paper problems. (16)

1. Web tear
2. Web out of round
3. Too many splices in paper reel
4. Missed -splice

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[4364-184]
B.E.(Printing) Examination 2013
Electronic Image Setting
(2003 pattern)

Time-Three hours

Maximum Marks-100

[Total No. of Question=6]

[Total no. of printed pages= 2]

Instructions:

- (1) All questions are compulsory.
 - (2) Neat diagrams must be drawn whenever necessary.
-
-

SECTION-I

- Q.1 (a) What is workflow? What is difference between workflow and jobflow?
Give example of each. (16)
(b) Draw the workflow for news paper work and explain the same. (16)
- OR
- Q.1 (a) Write short notes on . (16)
(a) Apr and ODI Server
(b) Imposition: Conventional Vs Digital
- (b) Explain the following
(a) Trapping
(b) Pre-flight checking.
- Q.2 (a) What is job ticket? Write in details its purpose and need. (16)
(b) Draw a workflow for complete magazine work and also explain the same.
- Q.2 (a) What is the difference between conventional and digital workflow. State merits of digital over conventional workflow.
(b) What is job archiving? Explain in details. State any case where job archiving is very significant. (16)
- Q.3 Write note on: (18)
(a) Font emulation
(b) PJTF
(c) Image setter resolution
(d) Postscript as a output format
- OR
- Q.3 What are the different types of PDF exclusive printing? Explain in details. (18)

SECTION-II

- Q.4 (a) Explain the following modules. (18)
(i) Management module
(ii) Production module
(b) What is JDF? What are its features and advantages?

OR

- Q.4 (a) Explain the following (18)
(i) Job administration module
(ii) Job archiving module
(b) How is PDF file said to make the workflow more efficient? Explain in details.

- Q.5 (a) What are different types of proofs? Which type of proof is termed as contract proof? Why is it termed so? (16)

OR

- Q.5 Explain any type of digital proofing technology with neat principle diagram of working. (16)

- Q.6 Explain in details of lossless image compression. (16)

OR

- Q.6 Explain with neat workflow diagram fundamental steps and elements of digital image processing. (16)

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[4364]-186

B. E. (Printing) Examination - 2013
FLEXIBLE PACKAGING (Elective I)
(2003 Pattern)

[Time : 3 Hours]

[Max. Marks : 100]

Total No. of Questions : 12

[Total No. of Printed Pages :2]

Instructions :

- (1) *Answers to the two sections should be written in separate answer-books.*
- (2) *Draw neat diagram wherever necessary.*

SECTION I

- Q1) a) Explain in detail the necessities for packaging. [18]
OR
- Q1) Write notes on [18]
a) PS b) LDPE c) BOPP
- Q2) Explain in detail Hot-Melt lamination process. [16]
OR
- Q2) Explain Blown film Extrusion technique. [16]
- Q3) Explain in detail Retort packaging technique for a product. [16]
OR
- Q3) Explain in detail Aseptic packaging for a liquid product. [16]

SECTION II

- Q4) Explain various types of closures along with their applications [16]
OR
- Q4) Describe the slitting and pouching technique for a flexible pouch. [16]
- Q5) Explain the packaging methods for alcoholic beverages. [18]
OR

Q5) Mention deterioration factors and packaging techniques for the following: [18]
a) Cheese b) Cooked Meat c) Mineral Water

Q6) Explain the Rotogravure process for Flexible Packaging. [16]

OR

Q6) Explain the Flexography process for lami-tubes [16]

[Total No. of Questions: 6]

[Total No. of Printed Pages: 2]

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[4364]-187

B. E. (Printing) Examination - 2013

Security Printing(2003 Course)

[Time: 3 Hours]

[Max. Marks: 100]

Instructions:

1 All questions are compulsory answer any one of each question

2 Q. 1,2,4 and 5 have 16 marks and Q. 3 and 6 have 18 marks

SECTION -I

Q.1 A What do you understand by the term Security Printing 16

OR

B Importance of Optical document security 16

Q2 A What are the considerations when designing security documents. 16

B The inks used in Security Printing 16

Q3 A What is RFID technology. When did it start and what is the present scenario of the same. 18

OR

B Define Smart Cards, Club Cards, Credit/Debit Cards. Which of these have direct financial implications? And how? 18

SECTION II

Q.4 A Define MICR printing. What is the use of the same Since when did it start in India 16

OR

	B	Give the layout of the currently used MICR cheque in India explaining the code line.	16
Q5	A	Explain the various Substrates used in Security Printing. Importance of watermarks on substrates.	16
		OR	
	B	Explain the various testing methods used and the deterrence measures used in inks and substrates	16
Q6	A	What in present times is the importance of Brand security and brand protection.	18
		OR	
	B	Explain: Holograms and its use. Use of invisible document security	18

[Total No. of Questions: 6]

[Total No. of Printed Pages: 3]

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[4364]-190
B. E. (Printing) Examination - 2013
SUBSTRATE AND INK TECHNOLOGY
(4082890) (2003 Course)

[Time: 3 Hours]

[Max. Marks: 100]

Instructions:

- 2 *Answers to the two sections should be written in separate answer-books.*
 - 3 *Black figures to the right indicate full marks.*
 - 5 *Neat diagrams must be drawn wherever necessary.*
-
-

SECTION - I

- Q.1 Answer any Two [18]
- A) Explain coating process and their importance in paper manufacturing
- B) Draw a neat diagram of uni-flow vat cylinder mould machine and discuss the advantages of this machine in the production of paper
- C) Mention the grades and advantages of polyethylene and polypropylene used in flexible packaging.
- Q.2 A) Answer any four [16]
- i) Grammage
 - ii) Gloss
 - iii) Caliper
 - iv) Opacity
 - v) Ash Content

- vi) Stiffness
- vii) Grain direction

Q. 3 Answer any Two [16]

- A) Different parameters need to consider while calculating total of printing job.
- B) To find the total quantity of paper required in the size 70x 80 cms for printing 15,000 booklets in the size 210 mm x 297mm assuming each booklets contains 16 pages.
- C) Consider the following data
 - i) Size of paper 50 x 54cms
 - ii) Total no. copies to be printed 700
 - iii) magazine Size 210mm x 297mm
 - iv) Assume magazine contains 28 pagesCalculate the total quantity of paper required

SECTION II

Q. 4 Answer any two [18]

- A) What are the different resins used in printing inks, explain with their purpose and properties.
- B) Explain solvent based Inks
- C) Explain different types of Additives used for manufacturing printing inks

Q. 5 Answer any two [16]

- A) Explain the following terms by considering Flexography printing process.
 - a) Viscosity

b) Parameters need to control for Ink Flow

c) Ink Temperature

B) Explain the instruments used for various ink testing methods.

C) Explain different ink testing methods used in laboratory

OR

Q. 6

Answer any two

[16]

A) Explain the advantages of water based ink against solvent based ink.

B) Explain the various Waste Management techniques

C) Explain any two

a) Security printing inks

b) Green printing

c) Solvent recovery method

[Total No. of Questions: 6]

[Total No. of Printed Pages: 2]

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[4364]-191

B. E. (Printing) Examination - 2013

Study of Advertising and Multimedia (2003 Course)

[Time: 3 Hours]

[Max. Marks: 100]

Instructions:

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

SECTION - I

- Q.1 Which are the different elements for construction of effective print advertising? Describe each in details. 18
- OR**
- Q.1 Role of copywriter and visualize is very crucial in the advertising agency. Justify. 18
- Q.2 What is campaigning? Explain the significance of campaigning with respect to launching of the product/services. 16
- OR**
- Q.2 With respect to Psychology used in advertisement; explain the following: 16
- a. Consumer behavior
 - b. Attitude, personality and self concept
 - c. Information processing, external environment
- Q. 3 Explain types of market segmentation in details. 16
- OR**
- Q. 3 Different approaches are used for market segmentation. Explain in details. 16

SECTION II

Q. 4	Explain in details the process of marketing research.	16
	OR	
Q. 4	Explain in details print media research.	16
Q. 5	Explain in details: product advertising and service advertising.	18
	OR	
Q. 5	Compare and contrast between following types of advertising: a. Public Relations advertising b. Institutional advertising	18
Q. 6	Explain cognizance model used for effective advertising.	16
	OR	
Q. 6	Explain AIDA model used for effective advertising.	16