## Cambridge International Examinations

Cambridge Pre-U Certificate

## BUSINESS AND MANAGEMENT (PRINCIPAL)

Paper 1 Business Concepts

Additional Materials: Answer Booklet/Paper

## READ THESE INSTRUCTIONS FIRST

If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.
Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, glue or correction fluid.
DO NOT WRITE IN ANY BARCODES.

## Section 1

Answer all questions.
The Insert contains the multiple-choice answer sheet on which you write your answers to Section 1.
For each question there are four possible answers $\mathbf{A}, \mathbf{B}, \mathbf{C}$ and $\mathbf{D}$.
Choose the one you consider correct and record your choice on the Insert.
Each correct answer will score one mark. A mark will not be deducted for a wrong answer.

## Section 2

Answer all questions.

## Section 3

Answer one question.
You are advised to spend 30 minutes on Section 1, 1 hour 15 minutes on Section 2, and 1 hour on Section 3.
At the end of the examination, fasten all your work securely together.
All questions in Section 1 are worth 1 mark. For Section 2 and Section 3 the number of marks is given in brackets [ ] at the end of each question or part question.

This document consists of $\mathbf{1 0}$ printed pages, $\mathbf{2}$ blank pages and 1 Insert.

## Section 1: Multiple Choice

## Answer all questions in this section.

## Record your answers on the Insert.

## You are advised to spend $\mathbf{3 0}$ minutes on the $\mathbf{2 0}$ questions in this section.

1 Which one of the following is a correct statement about Elton Mayo's views on employee motivation?

A Meeting social needs is important in satisfying employees.
B Pay is not an important motivator at work but core job dimensions are.
C Piece rate methods of pay are the most effective way of increasing employee productivity.
D The need for power influences employee behaviour.

2 Which one of the following statements about the internal rate of return (IRR) method of investment appraisal is correct?

A A low IRR means that future net cash inflows must be less than the cost of an investment project.

B If the IRR of project $A$ is higher than that of project $B$, then project $A$ must pay back its investment more quickly than $B$.

C The IRR of an investment project can be compared with the expected cost of finance to assess viability.

D The IRR on most projects will increase if the Bank of England raises interest rates.

3 In 2015 UK motorists purchased 2.63m new cars. This was an increase of $6.3 \%$ on the number of new cars sold in 2014. Ford's UK market share in 2014 was 13.2\%.
The total number of new Ford cars sold in the UK in 2014 was:
A 314215
B 326585
C 347160
D 369031

|  | 2016 | 2017 |
| :--- | ---: | ---: |
| Total employees (full time equivalent) | 2045 | 2030 |
| Total number of working days lost due to absenteeism | 6598 | 6612 |
| Number of employees who left ADC | 250 | 268 |

Table 1: Human resources data for ADC plc 2016-2017
Based on the data in Table 1, which one of the following statements about ADC is correct?
A Labour turnover and labour absenteeism both fell in 2017.
B Labour turnover fell but labour absenteeism increased in 2017.
C Labour turnover increased from 12.2\% to 13.2\% between 2016 and 2017.
D Labour turnover is increasing but at a slower rate.

5 Which one of the following is the most likely purpose of market positioning?
A to locate new retail stores close to large population centres to gain more customers
B to gain the highest market growth in a mass market
C to influence consumers' perceptions of a product in comparison to perceptions of rivals' products

D to compete effectively by producing goods or services which copy as closely as possible the features of competitors' products

6 Which one of the following statements about benchmarking is correct?
A It compares business performance with past time periods to assess the time when the business was most successful.

B It compares business performance against previously established targets or budgets.
C It attempts to establish best practice in the industry of which the business is a part.
D It can only be used to compare the products of a business with those of its rivals, not the production processes used.

7 Which one of the following changes to the organisational structure of a business is likely to result from delayering?

A increased spans of control and a reduction in the length of the chain of command
B increased centralisation and a reduction in the level of delegated authority
C increased decentralisation and a lengthening of the chain of command
D reduced spans of control and an increase in the level of delegated authority

| Variable cost per delegate per day | $£ 24$ |
| :--- | ---: |
| Cost to hotel of hiring special equipment requested | $£ 540$ |
| Allocated hotel overheads to conference profit centre (per day) | $£ 1200$ |

## Table 2: Excellent Hotel: Cost data for a business conference

The manager of a large sports promotion business has asked Excellent Hotel to quote a price per delegate for a one day conference for 200 delegates. Based on the data in Table 2, which one of the following statements is correct?

A Price per delegate of $£ 60$ will result in a total contribution of $£ 6660$.
B Price per delegate of $£ 50$ will result in a profit of $£ 4000$.
C Price per delegate of $£ 40$ will result in a contribution of $£ 3200$.
D Price per delegate of $£ 40$ will result in a profit of $£ 1560$.

9


Figure 1: Area between 0 (mean) and z

| 1.0 | 0.3413 |
| :--- | :--- |
| 1.1 | 0.3643 |
| 1.2 | 0.3849 |
| 1.3 | 0.4032 |
| 1.4 | 0.4192 |
| 1.5 | 0.4332 |
| 1.6 | 0.4452 |
| 1.7 | 0.4554 |
| 1.8 | 0.4641 |
| 1.9 | 0.4713 |
| 2.0 | 0.4772 |

Table 3: Areas under normal curve from the mean to z standard deviations from the mean

Batteries produced in a factory have lifetimes that are normally distributed. The mean lifetime is 500 hours and the standard deviation is 60 hours. Using the data in Table 3, what percentage of batteries have lifetimes less than 410 hours?

A $1.5 \%$
B 6.68\%
C $34.13 \%$
D $43.32 \%$

10 A business has estimated the price elasticity of demand (PED) for one of its products at -1.3 . Revenue from this product over the past 12 months was $£ 320000$, at an average price of $£ 8$ per unit. The business has announced a 40p increase in this price.
Assume the PED estimate is correct. What will be the change in revenue from this product over the next 12 months?

A $£ 37400$
B (£2600)
C (£5840)
D (£100800)

11 In which one of the following business situations is offensive marketing most likely to be used?
A A business with monopoly market power aims to increase customer loyalty.
B Most consumers of a product are young students who are not easily offended.
C Newly developed innovative products are being launched.
D Rival businesses are competing for market share.

12 In 2016 Tata was reported to be considering the sale of its loss-making Port Talbot steel works. The company blamed adverse world market conditions for the loss the business was making. Which one of the following best explains these 'adverse world market conditions'?

A capacity shortages in the global steel industry caused by a lack of investment
B discovery of new sources of iron ore which is used in steel making
C excess capacity in global steel production
D increasing global demand for cars and trucks

13 Which one of the following is a justification for using the declining-balance method of depreciation rather than the straight-line method?

A The declining balance method records higher business profit every year of an asset's useful life.

B The declining balance method reduces business profit by a constant amount each year.
C The straight-line method requires more accurate information before it can be calculated than the declining balance method.

D The straight-line method does not take into account that the reduction in an asset's value is often highest when it is relatively new.

14 The average price level in the eurozone fell in 2015 and was forecast not to rise in 2016. Which one of the following is the most likely consequence of this?

A Businesses in eurozone countries invest more as the real value of debts is falling.
B Real wages of workers in eurozone countries increase over this period if money (nominal) wages increase.

C The competitiveness of eurozone businesses falls if average annual global inflation is $5 \%$.
D The European Central Bank is more likely to increase interest rates to achieve its inflation target.

15 A confectionery business has analysed its product portfolio using the Boston Matrix. Which one of the following strategies is most likely to be used by this business as a result of one of its products being in the quadrant 'low market growth and high market share'?

A divest
B invest to maintain high market growth
C use market research to establish why this product is not successful
D use funds generated by the product to invest in new products

16 A fast food retailing business recorded an inventory turnover ratio of 40 for 2017. Cost of sales during 2017 was $£ 480000$ and is forecast to rise by $15 \%$ in 2018 . What average value of inventory will the business have to hold in order to increase the inventory turnover ratio to 50 in 2018 ?

A £11040
B £12000
C £13800
D £552000

17 On a critical path network diagram, activity F must be completed before G commences. This is the only activity that immediately precedes G. Selected information about these activities is shown in Table 4.

| Activity | Earliest start <br> time | Latest finish time | Duration of activity |
| :---: | :---: | :---: | :---: |
| F | 16 days | Not provided | 12 days |
| G | Not provided | 36 days | 8 days |

## Table 4

The total float time on activity $G$ is:
A 0 days
B 16 days
C 20 days
D 24 days

18 Which one of the following statements refers to quality assurance?
A It uses observation and other control techniques to check that products, once completed, meet quality standards.

B Inspectors play a key role in quality assurance as production employees cannot be trusted to meet quality standards.

C It involves the use of planned, systematic activities to check the quality of the product or service at the point of delivery to the customer.

D It is an all-embracing system that involves suppliers, production employees and pre-planned technical standards as part of the quality system.

19 When the UK government makes an important decision about airport infrastructure, such as the building of a new London runway, which one of the following factors is likely to be considered?

A the increase in 'green' consumerism
B the potential external costs of increased flights
C the social costs to the airport company building the runway
D the sustainability of the concrete to be used

20

|  |  | Sales (£m) | 8-period moving <br> average (trend) |
| :---: | :---: | :---: | :---: |
| 2017 | Quarter 1 | 230 | 228.75 |
|  | Quarter 2 | 268 | 232 |
|  | Quarter 3 | 245 | 235.25 |
|  | Quarter 4 | 190 | 239.375 |
| 2018 | Quarter 1 | 246 |  |
|  | Quarter 2 | 285 |  |

Table 5: Extract from a moving average sales forecast analysis
From the data given in Table 5, which one of the following statements is correct?
A There appears to be a downward trend in the sales data.
B A sales forecast can be made for 2018 Quarter 3 by extrapolating the trend to that quarter and dividing the estimated figure by 8 .

C The seasonal variation for 2017 Quarter 2 is positive and the seasonal variation for 2017 Quarter 4 is negative.

D The seasonal variation for 2017 Quarter 1 is negative and the seasonal variation for 2017 Quarter 4 is positive.

## Section 2: Case Study

## Answer all questions in this section.

## You are advised to spend 1 hour and 15 minutes on this section.

## Beamish Food Stores (BFS)

BFS is a public limited company. It owns and operates 80 food shops in the UK, all in the South West. Despite increasing competition from national supermarket chains, BFS's annual revenue has remained steady in recent years but it is losing market share. However, its profit margins remain just above average for the industry. BFS has some of the most loyal shoppers in food retailing, according to a recent national survey of supermarket consumers. The directors of BFS claim that the customer-focused marketing strategy used in recent years has encouraged BFS shoppers to remain loyal. This marketing strategy includes stocking a very wide range of exotic and unusual food items and free home delivery of all orders over $£ 60$.

## Market development - convenience stores

Traditional large food retailing shops, such as those operated by BFS, are losing market share. The big growth areas of food retailing are:

- Low price supermarkets such as Aldi
- Online grocery shopping
- Small local convenience stores

Convenience stores have seen rapid sales growth, especially in university towns with large student populations. Most students do not have cars. BFS closed all of its smallest stores over 25 years ago to focus on out-of-town shops. The directors have decided to re-enter the convenience store segment of the market. A trial store is to be opened early next year in a city in the South West with a large university near the city centre. The store will be called 'BFSCity'. 'We need a small but well motivated team of people working in these stores to keep labour costs down' the Operations Director told a recent Board meeting.

Some financial estimates for this new shop are shown in Table A.

| Capital cost of fitting out the premises | $£ 0.5 \mathrm{~m}$ |
| :--- | ---: |
| Annual rent | $£ 32000$ |
| Other shop fixed costs per month (including labour costs) | $£ 6000$ |
| Budgeted average spend per customer per visit | $£ 12$ |
| Contribution made from average customer spend | $£ 2$ |

Table A: Financial estimates for the first 'BFSCity’ store

## BFS - Operations Director tackles the wastage problem

BFS currently dumps around 5000 tonnes of unsold food each year. This is about $7 \%$ of all of the food it buys from suppliers. There are several reasons for this waste. Some food is damaged during unloading or storage in the shops. A small proportion of food is damaged by careless consumer handling - but then not purchased. The main reason is that many food items are unsold by their sell-by date despite being perfectly safe and usable for at least two days after this. The BFS Operations Director is increasingly concerned about this level of waste. He told other directors three months ago: 'The industry faces legal controls unless we put our own house in order. In France it is illegal for supermarkets to throw food away and it must be given to charity. There are ethical and cost issues too.'

Since then BFS has introduced a food waste reduction programme. This includes the following initiatives:

- Give away food on its sell-by date to low-income families who can prove they receive government benefits.
- Reduce order sizes from suppliers and cut inventory levels of some perishable food products in BFS shops.
- Insist that suppliers use stronger packaging and more genetically modified ingredients to extend food shelf life.


## Budget setting

Although each shop manager has considerable freedom to stock items requested by local consumers, other key decisions are taken centrally. These include promotion strategies and budget setting. The master budget for BFS is agreed annually by directors. Senior managers then allocate budgets to each shop for major financial measures such as shop fixed costs, employee costs and revenue. These budgets are then communicated to each shop manager. Every month, these managers are asked to report back to Head Office with details of adverse variances with a report explaining them. Some shop managers consider this system to be too centralised. One manager reported back to Head Office last week that: 'My shop's adverse variances are mainly the result of low demand caused by increased unemployment in the town after a major employer shut down. It is demotivating to have unrealistic targets set with no account taken of local conditions.'

21 (a) Refer to the data in Table A.
(i) Calculate the monthly break-even number of customers.
(ii) Calculate the annual profit if there are 100000 customers in the first year of trading.
(b) Evaluate the usefulness of your results to part (a) and other information provided when deciding whether to open more BFSCity shops.

22 Evaluate the importance of effective budgeting to the future success of BFS.

23 Recommend a suitable marketing mix for the new BFSCity convenience stores. Justify your recommendation.

24 Assess the potential benefits to BFS from its food waste reduction programme.

## Section 3: Essay

## Answer one question in this section.

## You are advised to spend 1 hour on this section. Relevant references to real world business examples will be expected.

25 'Because of the increased use of social media on smartphones and social media's involvement in retail sales, 'social selling' has become red hot. Anyone hoping to improve their online sales success must take advantage of emerging trends.'
(Eddie Machaalani, co-CEO, BigCommerce)
Discuss the likely significance of taking 'advantage of emerging trends' in e-commerce to business success.

26 In April 2016 the UK National Living Wage (NLW) was introduced at $£ 7.20$ per hour for workers aged 25 and over. It is due to rise to over $£ 9$ per hour in 2020.

Evaluate the likely impact of the NLW on UK businesses.

27 'Hire people who are better than you and then leave them to get on with it.'
(David Ogilvy, founder of Ogilvy \& Mather, Marketing and PR company)
Discuss whether this approach to leadership would be effective in all organisations.

28 Evaluate the importance of location decisions to the profitability of businesses in different service sector industries.

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