

Singapore CA Qualification (Foundation) Examination

20 June 2018

Accounting for Decision Making

INSTRUCTIONS TO CANDIDATES:

1. The time allowed for this examination paper is **3 hours 15 minutes**, including 15 minutes of reading time. Only annotations are allowed on the question paper during the reading time.
2. This examination paper has **FOUR (4)** questions and comprises **FOURTEEN (14)** pages (including this instruction sheet and appendix A). Each question may have **MULTIPLE** parts and **ALL** questions are examinable.
3. Only calculators that comply with the SAC's regulations may be used during the examination. However, computers, mobile phones, tablets, and other electronic devices **MUST NOT** be used during the examination.
4. The number of marks allocated is shown at the end of each question.
5. Write legibly in black/blue ink only.
6. All answers must be written in the answer booklets provided.
7. Begin your answer to each question in a separate answer booklet.
8. This question paper **MUST NOT** be removed from the examination room.
9. This examination paper is the property of the Singapore Accountancy Commission.

MODULE-SPECIFIC INSTRUCTIONS:

10. Assume that all dollar amounts are in Singapore dollar (S\$) unless otherwise stated.
11. This is a restricted open book examination. This means that you are allowed to only bring the following materials into the examination hall:
 - One A4-sized double-sided cheat sheet.

The following background information is relevant for all questions

About BSB Education

BSB Education Institute (BSB) is a new private education institution dedicated to broadening the opportunities for Polytechnic and Junior College students to achieve alternative qualifications (for example, fashion design) or overseas degrees in Singapore. The Director of Education (DoE) is also keen on offering classes to help students pass business professional qualifications including those in Data Analytics, Accounting, Banking and Finance, Human Resource Management (HRM), and Marketing. The DoE aspires to help the younger generation achieve their personal and professional best and to nurture future talents. BSB also offers business training to help improve productivity and performance of organisations and their employees.

BSB has two business divisions:

- 1) Professional and Executive Development (PED); and
- 2) Diploma and Degree Programmes (Academic).

The PED division offers short courses which range from a few hours to three months whereas the Academic division offers diploma and degree programmes (undergraduate and postgraduate degrees) ranging from six months to three years in duration.

BSB has recruited office administrative and management staff who are working at the leased premises where the fitted-out classrooms are located. Fixed assets have been purchased and annual fixed costs totalling \$5.3 million have been committed.

Question 1 – (a) only

About the Private Education Sector in Singapore

Private education is a very competitive market in Singapore, with many new entrants and many organisations exiting the industry. According to the Committee for Private Education (CPE), there are nearly 300 registered private education institutions (PEI) with approximately 40 per cent holding EduTrust or Provisional EduTrust certification, recognising that these PEIs have achieved higher standards in key areas of management and provision of educational services. However, over the past few years many private education providers were deregistered or decided not to re-register, including some well-known international names.

Despite continuous economic growth, a major concern among economists is the weakness in Singapore's labour market, which has so far failed to benefit from the positive momentum in the economy due to a mismatch in job vacancies, as well as the skill sets and experience of available workers.

The Singapore government therefore introduced SkillsFuture Singapore (SSG). SSG aims to develop Singaporeans to their fullest potential throughout their lives. With the continuous disruption from technology and mismatched job skills, training providers working with other partners in the Continuing Education and Training ecosystem need to keep up with technological advances and globalisation to meet the demands of the economy. This poses a potential challenge in recruiting instructors with suitable experience and skill sets.

Small and Medium Enterprises (SMEs) can receive generous subsidies under the Enhanced Training Support Scheme for SMEs when they sponsor their employees to attend courses and training.

For fresh Polytechnic and Institute of Technical Education (ITE) graduates who are keen to join the workforce earlier, SSG has work-study programmes that feature a combination of workplace-based and institution-based learning that provide support for transitioning into the workforce.

For the university sector, the Singapore government is planning to add further places with more opportunities and choices. There is now more emphasis on blending technologies with the traditional classroom setting to create an interactive delivery environment and options for online assessment.

For professional and executive development, Singapore has more than 6,000 Multinational Corporations (MNCs) with at least half of them having regional responsibilities, such as training, to harmonise their internal practices. Therefore, a niche market for reputable institutions to provide high-quality professional and executive training courses exists in Singapore.

Question 1 required:

- (a)** Using the facts above and your general understanding of Singapore (the economy, the lifestyle, the opportunities for young people, etc.), perform a PEST (Political, Economic, Social, and Technological) analysis to assess the implications for BSB's business over the next three years. Provide TWO analyses per each perspective of the PEST framework. **(16 marks)**

(Total: 16 marks)

Question 2 – (a) and (b)

Quality of teaching is critical to the success of BSB's two business divisions.

The PED division offers short courses and will cover the SkillsFuture Singapore courses and workshops. For the Diploma and Degree Programmes offered by the Academic division, BSB graduates' subsequent employment rates and achievements are critical. To increase the chance of success for the diploma and degree programmes, the DoE is considering deferring the start of the first class by two months, so that BSB has more time to recruit quality instructors and provide them with appropriate training to implement blended learning (combining online digital media with traditional classroom instruction). The DoE also believes that the delay in the start date may help better plan for related student support and career services (e.g. Internships) that may achieve better employment rates post graduation.

Question 2 required:

- (a) Use the Quality, Cost, and Time Triangle to analyse whether BSB should defer the start of the first class for both divisions (the PED Division and the Academic Division). **(6 marks)**
- (b) Suggest and justify ONE practical Key Performance Indicator (KPI) for each of the following four perspectives in BSB:
- (i) Financial;
 - (ii) Customer/stakeholder;
 - (iii) Internal business processes; and
 - (iv) Learning & growth.

You should structure your answer using the following format:

Perspective	KPI (1 mark each)	Justification (2 marks per justification)
Financial		
Customer/ stakeholder		
Internal business processes		
Learning & growth		

(12 marks)

(Total: 18 marks)

Question 3 – (a), (b), and (c)

The market for private education and training is a very competitive market. Being a new player, BSB will only be able to charge competitive market rates or lower in the beginning years unless it can convince the market it offers a premium product. Its pricing strategies will also be affected by the types of courses offered, for example, diploma, degree, professional examination preparation. Furthermore, diploma and degree courses may require strategic partners to offer accreditation and certification whereas professional examination preparation may be driven by the passing rates achieved.

BSB's ability to deliver quality services is one of the critical factors for its revenue and business sustainability. However, quality instructors are not readily available at affordable rates. Encouraging quality students to enrol for BSB's courses will also be a challenge.

To ensure each student is well looked after during class time, BSB sets the maximum class size to 40 but requires a minimum of 25 students to start a class. Maintaining this range for class size also helps BSB plan classroom design as different programmes will share these facilities. With high rental costs and the initial investment for the computer system, library, fixtures and fittings, and marketing, BSB is expecting relatively high fixed costs per year. In addition, BSB pays a referral fee of 5% of the course fee to any person who successfully introduces a new student.

Monthly accounts will be prepared to help understand the progress of the business and to control cash flow. When preparing the detailed budget, the DoE always chooses the lowest cost option. For example, if there are 120 students, three sessions will be offered instead of four or five sessions to help minimise costs. However, BSB assumes some costs are unavoidable. For instance, while not all students are referred, for budgeting purposes BSB assumes a 5% referral fee will be paid in full for every new student it enrolls.

Instructor requirements are forecasted based on the number of sessions delivered, which is determined by expected student enrolment numbers and types of programmes. Instructors teaching diploma (D), undergraduate (UG), and postgraduate (PG) courses will be paid \$90, \$110, and \$130 per hour of face-to-face contact, respectively. These rates are \$10 per hour more than the market rates offered by competitors to attract better quality instructors to join BSB.

Due to various operational differences, such as venue and instructor fee structure for conducting PED courses, costs and budgets for each division are separately prepared. The PED and the diploma and degree (Academic) divisions have committed fixed expenses and assets purchased for 20x8 as follows:

Division	\$
Professional and Executive Development (PED)	800,000
Academic	4,500,000

The breakdown of the \$4.5 million assets purchased and fixed expenses commitment of the **Academic division** for 20x8 is as follows:

Assets purchased and fixed expenses commitment	\$
Furniture and Fittings (installed in the beginning of February 20x8)	810,000
Computers and Software (installed in the beginning of February 20x8)	1,530,000
Rental for 20x8 (February to December 20x8)	1,100,000
Other operating costs	400,000
Estimated administrative staff costs for 20x8	660,000
	<u>4,500,000</u>

Asset class	Useful Life	Scrap value
Furniture and Fittings	60 months	Zero
Computers and Software	36 months	Zero
BSB depreciates all assets using the straight-line method. In the first year, BSB allocates depreciation proportionally based on date of installation.		

For the first year of operation, BSB's projected enrolments are 75, 130, and 100 students for the D, UG, and PG programmes respectively. The courses are organised in trimesters of four months each with the first trimester (T1) starting in January, the second trimester (T2) in May, and the third trimester (T3) in September in each year. The modules for each programme are equally spaced out across each trimester.

Financial Forecast for 20x8 (based on a maximum class size of 40 students)

Course type	D	UG	PG
Number of students per intake in 20x8	75	130	100
Number of modules for the programme	8	27	12
Number of modules per trimester	4	3	4
Length of instruction per week per module (hours)	3	3	3
Number of weeks of instruction per module (weeks)	13	14	13
Miscellaneous costs per student per trimester (\$)	\$100	\$120	\$150
Average length of the programme (trimesters)	2	9	3
Average fee for a programme (\$)	\$6,000	\$27,000	\$18,000
Average cost per instructor hour (\$)	\$90	\$110	\$130

Question 3 required:

- (a) Assuming that BSB starts classes in Trimester 2 (T2) of 20x8, compute the profit (loss) before tax for the year ending 31 December 20x8. **(14 marks)**

BSB wants to improve its financial performance in 20x8. It is considering increasing the maximum class size from 40 to 50 students. To maintain the quality of the education provided, the increase in class size will be compensated by increasing the number of weeks of instruction per module for each programme by an extra one week.

- (b) Determine the impact of this change on the profit (loss) for the year ending 31 December 20x8. **(10 marks)**

- (c) BSB is considering introducing an online certificate in accounting in 20x9 in its PED division. It has the following estimates for the programme and the investment at most can last two years.

Fixed and variable expenses over two years

Equipment and software	\$300,000
Purchase of online content	\$500,000
General marketing costs for the programme	\$40,000
Specific marketing cost per student	5% of the course fee
Cost of services provided per student	\$120
Examination grading per student	\$50

Revenue

Course fee per student	\$860
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- (i) Calculate the expected profit from this programme if 2,000 students enrol and complete this programme within two years. **(8 marks)**
- (ii) Determine the number of students required to enrol in this programme if BSB wants to make a profit of \$120,000 from this investment. **(4 marks)**

(Total: 36 marks)

Question 4 – (a), (b), and (c)

BSB is considering implementing activity-based costing to allocate the following fixed costs to the three programmes – Diploma (D), Undergraduate (UG), and Postgraduate (PG) in its Academic division:

- Depreciation of furniture and fittings;
- Depreciation of computer equipment and software;
- Rental of premises;
- Other operating expenses; and
- Administrative labour costs (including student support e.g. career and internship).

BSB's accountant unfortunately fell sick and requires two weeks medical leave. You are required to help BSB with the following tasks while the accountant is away.

Question 4 required:

- (a) For the THREE fixed costs shown in the table below, recommend ONE possible cost driver for cost allocation purposes and justify your recommendation. You should present your answer in the following format.

Fixed cost component	Cost Driver	Justification
Rental of premises		
Other operating expenses		
Administrative labour costs		

(6 marks)

- (b) BSB would like to adopt a single cost driver allocation technique and is considering two potential cost drivers: 1) the number of hours of instruction conducted for each programme and 2) the number of students in each programme.

Cost Drivers	D	UG	PG	Total
Number of instruction hours per module	624	1,008	936	2,568
Number of students	75	130	100	305

BSB has estimated the total fixed costs for 20x8 to be \$2,776,000.

- (i) Allocate the total fixed costs using the two potential single cost drivers above to the three programmes (Diploma (D), Undergraduate (UG), and Postgraduate (PG)). Round your answers to the nearest dollar.

(6 marks)

- (ii) Comment on the key differences in the fixed costs allocated to each programme under the two different cost drivers in (i) above and identify TWO problems with using a single cost driver to allocate all fixed costs.

(6 marks)

(c) Explain how the following costing methods can be deployed in BSB's operations and describe how each technique can create value for BSB.

(i) Target costing (in your explanation, you can assume that BSB expects to achieve a target contribution margin of at least 85% and a target net profit margin of not less than 10% in the long run); **(6 marks)**

(ii) Job costing; and **(3 marks)**

(iii) Activity-based costing. **(3 marks)**

(Total: 30 marks)

END OF PAPER

Appendix A – Common verbs used by the Examiners

Verb	Description
Allocate	Ascertain or conclude after analysis and evaluation the most appropriate apportionment (split) of costs from a range of viable alternatives.
Calculate / Compute	Do the number crunching and derive the correct answer. Make sure that you write down your workings and crosscheck your numbers.
Comment	Comment is similar to evaluate in that you are required to make a judgment or provide your opinion based on the facts at hand. Professional scepticism and professional judgment are called for when commenting .
Determine	Ascertain or conclude after analysis and evaluation the most appropriate course of action or most correct answer from a range of viable alternatives.
Explain	Explain requires you to write at least several sentences conveying how you have analysed the information in a way that a layperson can easily understand the concept or grasp the technical issue at hand.
Identify	Identify is similar to list, but requires you to also provide an explanation as to why the item/s that you have identified is/are relevant to the facts given in the question.
Justify	Whenever you see the word justify you <u>must</u> provide reasons for your answer, in other words, provide support for your argument or conclusion. If you fail to justify your answer, you will lose valuable marks.
Perform	This instruction tells you the type of model that you must use when formulating your answer or that you must relate your answer to the specific facts given in the question scenario.
Provide	Put forward (for example, a point of view, idea, argument, alternatives, etc.) for consideration or action and justify your opinion.
Recommend	Make a statement about the most appropriate course of action. If there is more than one possible course of action, state which action you would choose and why (justify your choice).
Suggest	Put forward (for example, a point of view, idea, argument, alternatives, etc.) for consideration or action.
Use / Using	This instruction tells you the type of model that you must use when formulating your answer or that you must relate your answer to the specific facts given in the question scenario.