

SECTION B**Question 4**

[10 Marks]

S/no	a. Issues	b. Measures and how they help
1	3-yearly replacement of equipment	Delay replacements. This will lower the annual cost of replacements.
2	Need to maintain both digital and analog lines and related equipment (eg. analog PABX).	Convert analog phone lines to VOIP. This will reduce the number of lines for maintenance. Will also give opportunity to use open source PABC which might have lower costs. Can also reduce the IDD costs to overseas branches by using internal VOIP calls over the existing data lines.
3	High travel expenses of staff	Use of Video Conferencing can help to reduce the travel expenses and may even help increase revenue through increased communication with overseas customers. Use of Teleworking for staff who seldom need to be in office can save office space costs. Staff can work either from overseas, customer premises or from home.
4	Diversity of PDA and notebooks based on user's choice	Standardise on the PDA and notebooks to be issued to staff so as to reduce maintenance costs. Standardisation also allow for aggregating of the purchase so as to have better bargaining power with vendor.
5	Leaving PCs and printers overnight	Switch off when not in use so as to reduce electricity usage and save cost. It is also more environmentally friendly.
6	Overprovision of printers and wastage in use of paper and toners	Implement guidelines or controls on use of printers. Eg. control colour printer to be used only when necessary. Normal printing to be set as default double-sided to save paper. Chargeout to user Depts for the cost of printers and paper.
7	Diversity of development environments – eg. programming languages and databases	To streamline so as to achieve better economy of scale.

S/no	a. Issues	b. Measures and how they help
8	Too many data centres	Data centre consolidation (where possible – ie. those not required by regulation to be separate) so as to achieve better economy of scale.
9	Under-utilisation of servers	To do virtualisation so that can continue to have the benefit of isolation of problems through virtual ‘servers’ while consolidating the actual hardware in use.
10	Provision of servers just for occasional peak usage	To use capacity on demand so as to avoid paying for capacity throughout the whole year when it is only needed on some special occasions.
11	Use of generic servers for specialised services	To consider change to appliances which may be more cost-effective for the specialised task since will not need the full function of servers
12	Diversity of hardware and solutions	<p>To consider IT Governance to control users from unilateral purchases which may lead to loss of cost control.</p> <p>To consider Enterprise Architecture to have a roadmap to guide purchases of hardware and solutions.</p> <p>To consider streamline and reduce diversity of email and ERP so as to achieve better economy of scale.</p>